Jun 22 '56

NATIONAL FISHERMAN

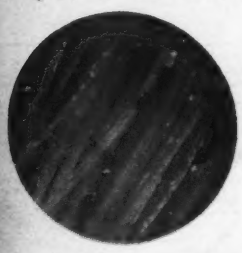
JUNE 1956

Longer, Stronger Life for Columbian Manila Rope

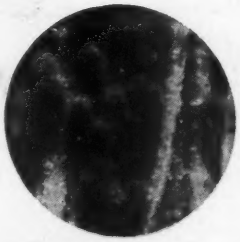
You get THIS : instead of THIS

with Columbian's Amazing Anti-Rot Treatment . . . even after years of use!

Laboratory Tests Prove Power of Special Columbian Treatment



Microphoto of *treated* Manila fibres after 2-week incubation with green mold spores. *Only original spores applied for test are present.*



Microphoto of *untreated* fibres after same 2-week test shows jungle of spores whose "roots" feed on fibre, leaving it rotted, useless.

- For tough, resilient strength . . . the very best Manila fibres.
- For internal mechanical friction . . . thorough, lasting lubrication.
- And now . . . for protection against decay-producing moisture . . . the new Columbian Anti-Rot Treatment that stops mold, mildew, fungi and decay bacteria cold!

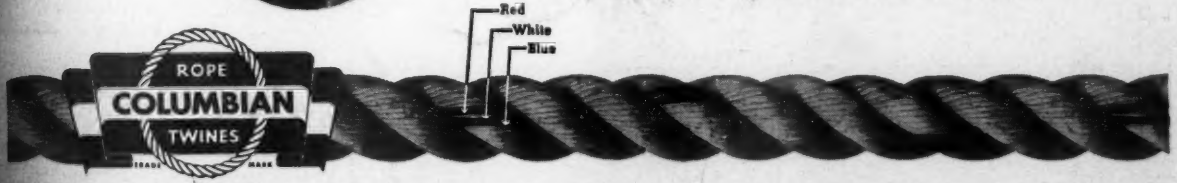
Thousands of laboratory experiments tested the Columbian Anti-Rot Treatment for effectiveness against all types of cellulose-attacking organisms found in soil, air, fresh and salt water.

Ten years of actual-usage reports from all parts of the world prove that effectiveness.

Every foot of Columbian Manila Rope is adequately protected against decay for YOUR climate, YOUR uses, YOUR methods of handling!

COLUMBIAN ROPE COMPANY, Auburn, "The Cordage City", N.Y.

THE ROPE WITH THE RED, WHITE AND BLUE MARKERS



The Engineer's Report

CASE HISTORY
RPM Delo Oils
PRODUCT

M.V. Nancy Hanks, San Pedro, Calif.
FIRM

Special oil ends ring trouble and oil burning!

BEFORE USING RPM DELO LUBRICATING OIL, Jim and Matt Martin had trouble with loss of compression, hard starting and excessive oil consumption in the M.V. Nancy Hanks 180 h.p. Atlas diesel. Overhaul in 1950 showed competitive oil caused hard carbon deposits in ring grooves and on other parts. Run exclusively on RPM DELO Lubricating Oil since overhaul, they have had no further trouble. "RPM DELO" keeps rings clean and reduces wear; oil consumption still is normal and compression remains up to factory standards. Engine is in top condition in spite of year-round hard work.

"WE HAVEN'T TAKEN UP ONE BEARING in the five years we've used RPM DELO Lubricating Oil," says Chief Engineer Jim Martin (above, left). "And in this time we haven't been bothered with any kind of piston trouble." The Nancy Hanks works off the Southern California coast as a purse seiner; operates 12 months of the year.

REMARKS: RPM DELO Marine Oil works to develop the highest efficiency in all diesel engines. Oil is well adapted for marine operation; stops bearing corrosion and foaming in wet and dry sump engines.

FOR MORE INFORMATION about RPM DELO Marine Lubricating Oil or other petroleum products, or the name of your nearest distributor, write or call any of the companies listed below.

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How RPM DELO Oils keep engines clean and prevent wear

A. Contain special additives that provide metal-adhesion qualities...protect parts whether hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent piston scuffing.

C. Special compounds stop corrosion of any bearing metal and foaming in crankcase.

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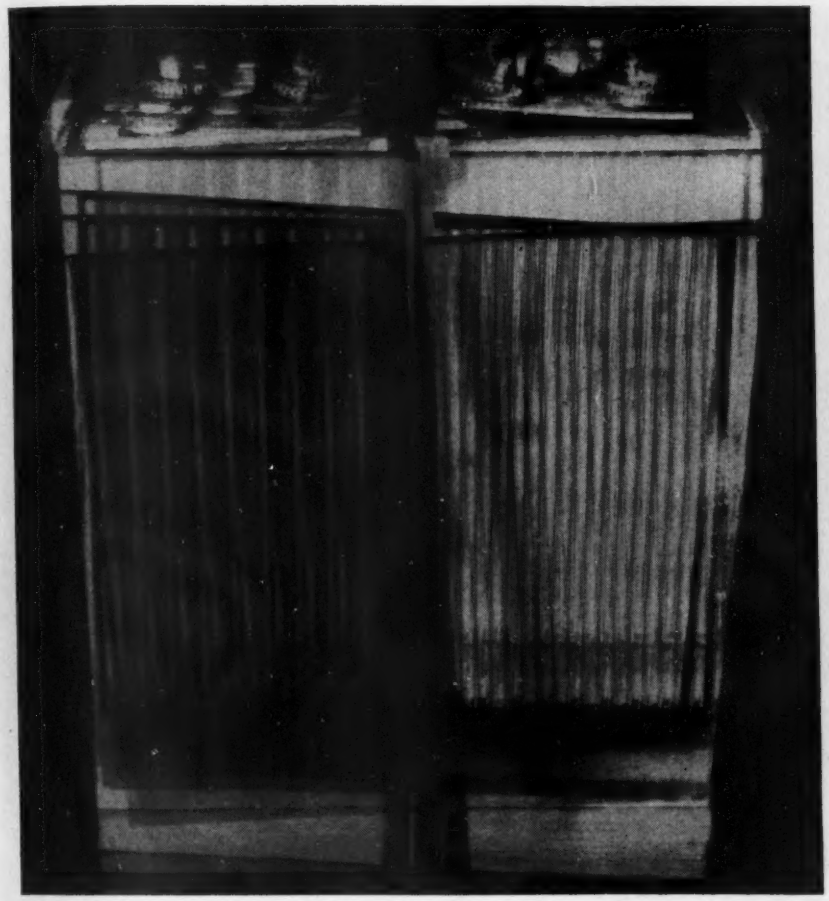
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado

EXIDE-IRONCLAD BATTERIES

For all marine applications



Actual photo taken during vibration torture test on an Ironclad Battery

Section of Ironclad positive plate

Vibration can't loosen active material — can't shorten battery life

BATTERY FOR MARINE SERVICE. Exide-Ironclad Model MVD. Write for Bulletin No. 5190.

When a heavy duty storage battery gets the "shake treatment," battery life is literally at the mercy of the bond between the positive grid and the active material. Heavy shedding means short life.

But look what happens in an Exide-Ironclad Battery. Active material is held firmly captive inside the plastic power tubes. Hair-thin slits let electrolyte in, but keep active material from falling out. In prolonged vibration tests, this unique design has proved to be a valuable battery life stretcher. These findings are confirmed in the long, dependable service of Exide-Ironclad Batteries in typical high-vibration applications.

This superior performance is only one of the many extra advantages in Exide-Ironclad Batteries — advantages that have earned them an unmatched reputation for long life and high capacity. When you order heavy duty batteries, or the equipment that requires them, be sure to specify Exide-Ironclad. Write for detailed bulletin. Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

Exide®

B.F.Goodrich

3200 Spongex floats do the work of 7000 conventional floats on this 9 ton net

3000 Spongex Floats celebrate their 5th birthday

After 5 seasons' experience with over 3000 Spongex® seine floats, Capt. C.H. Clark, fishing supervisor for Nelson Bros. Fisheries, Vancouver, B. C. and captain of their 122 ton flagship "Western Producer", says,

"I'm convinced Spongex floats are a major improvement over what we've had in the past. The floats on my net have been in service for five seasons and they look practically new. With conventional floats, I'd have started on the third set by now. Furthermore, corks absorb water, lose buoyancy—take valuable time to dry out. This doesn't happen with Spongex floats—they absorb virtually no water at all.

"Another real advantage is a 1500 lb. reduction in total weight. This means lighter work for the crew and with the net carried on the stern a difference of about 5 tons in capacity of any bulk fish."

As fishing supervisor, Capt. Clark says, "Ultimately the entire fleet will be equipped with Spongex floats."

Since the oval floats have been in service, B.F. Goodrich has developed a cylindrical shaped float in 12 sizes from 3" x 1½" to 6" x 7½". Generally, these floats are believed to be even better than the original ones.

Whichever float shape you prefer, your fishing operation will benefit. Write for information and prices to the address below.

B.F.Goodrich

SPONGE PRODUCTS DIVISION

243 DERBY PLACE, SHELTON, CONNECTICUT

June 1956 Vol. 37 No. 5

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NATIONAL FISHERMAN

The Fishing Industry Magazine

Formerly Atlantic Fisherman, Established 1919.

Federal Fisheries Loan Fund Desirable

The White House early this month announced the creation of a new Bureau of Fisheries within the Department of Interior, effective July 1. The Bureau will have sole responsibility for Federal programs related to the fisheries, taking over all fishery activities now vested in the Fish and Wildlife Service.

The Administration also has submitted to Congress a Bill which would provide a comprehensive commercial fisheries program, and set up a broad charter for the new agency. It would authorize needed investigations and research into all phases of the fisheries, including economic studies of the distribution and abundance of fishery resources, development of new and improved methods of fishing, and measures for sustaining the resources at maximum levels of production.

The Bill would establish a special $10,000,000 revolving fund to be used to make loans for the operations, maintenance, replacement, repair and equipment of fishing gear and vessels, and for research into the basic problems of fisheries. Loans would bear an interest rate of not less than three percent, and could be made for periods up to ten years, provided suitable financial assistance is not available elsewhere on reasonable terms.

In addition, the Bill would provide for developing and improving standards of quality. A service for inspecting, certifying and identifying grades of fishery products shipped in interstate commerce would be available on an optional basis, at reasonable fees.

The provisions of the Saltonstall-Kennedy Act, dealing with the transfer of certain funds from the Department of Agriculture, would be continued on a permanent basis, and the present 3 million dollar limitation on expenditure of these funds would be removed.

The need for more Government aid for the fishing industry has been pointed out by Donald J. White, Boston College School of Business Administration, who has made an exhaustive study of the New England fisheries. At a talk in Gloucester last month he said that fishing boat owners in the United States are entitled to some direct assistance from Government.

Dr. White cited the provisions for loan arrangements in many foreign countries that cut costs or provide for fish inspection service, training schools and technical aid which raise efficiency and enhance the marketability of fish products. In Canada, he stated, fishermen can obtain subsidies of as much as $255 per gross ton and $15 per horsepower for boats of approved design and size. The subsidy can amount to 35 percent of the total cost. In addition, fishermen who can pay 25 percent of the total cost, can borrow the balance, repayable over a period of 10 years.

The provision for a Fisheries Loan Fund in the Administration's Fisheries Bill is a step in the right direction. From all indications, a system of Government sponsored loans for the construction, modernization and equipping of fishing boats would be highly desirable for American fishermen. It would aid them in maintaining an up-to-date fleet of efficient vessels, and place them in a more equitable position for competing with foreign producers.

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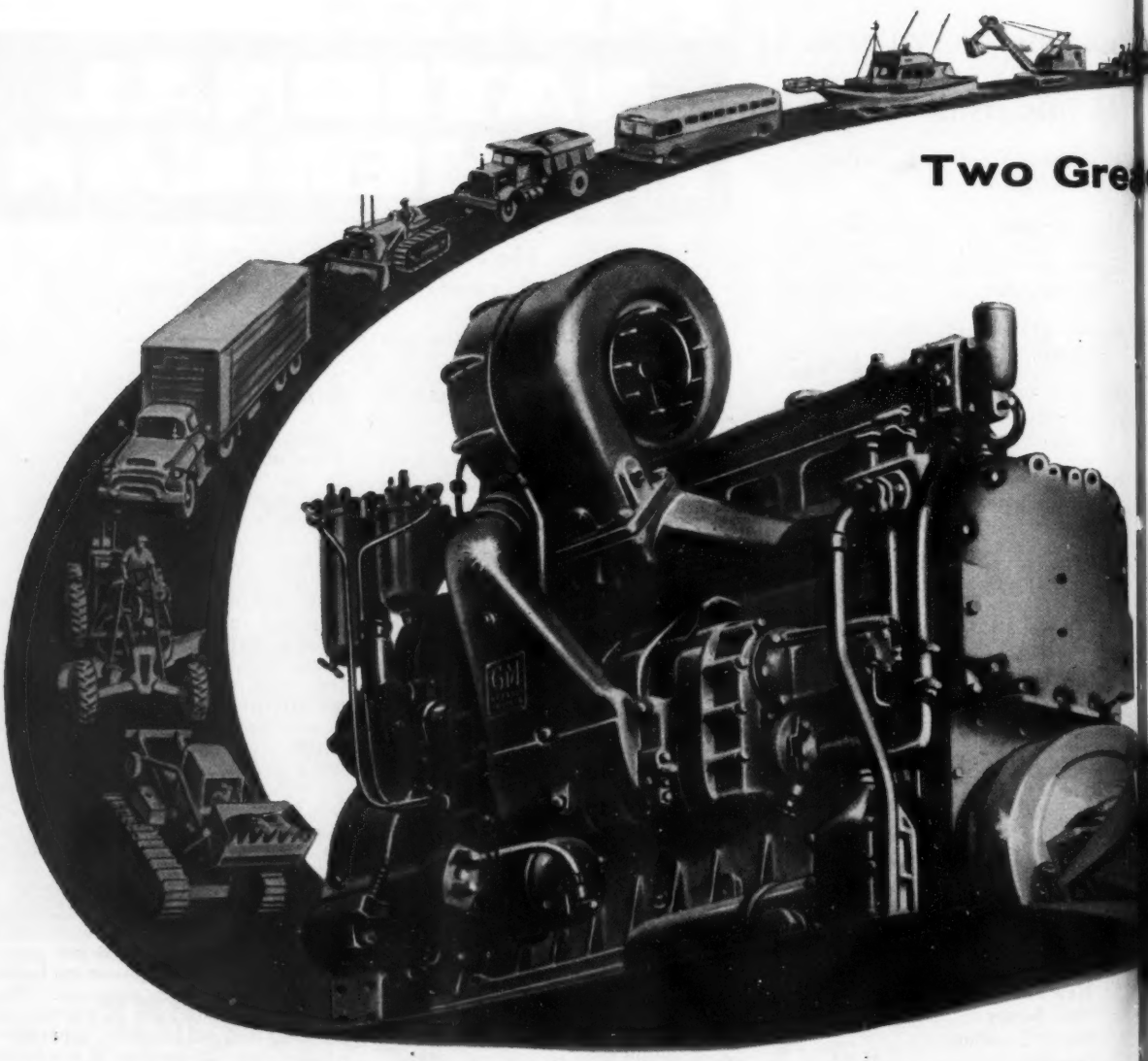

Two Gre ew

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Increased Power—Decreased Fuel

Here's exciting news for power users—great new 4- and 6-cylinder GM Detroit Diesel engines that represent another long forward step by the leader in the Diesel engine field. With this new, more efficient Detroit Diesel Turbopower you can have up to 17% more power with no increase in fuel consumption—or the same power output with fuel saving up to 15%.

Detroit Diesel engineers have Turbo-charged 2-cycle Diesels by combining an exhaust-driven turbine with the engine blower to deliver a larger supply of fresh air to the cylinders. Result: improved combustion, freer engine breathing, quieter and more efficient performance in the higher speed ranges.

Turbopower Diesels are additions to Detroit Diesel's time-proved Series 71 line, world's most widely used Diesel engines. The four-cylinder Turbopower Diesel delivers 171 H.P. at 2300 R.P.M.; the six-cylinder engine produces 280 H.P. at 2300 R.P.M.

To truckers Turbopower means speed-ier, more economical movement of payloads.

To boatmen it means faster speed longer cruising range—more room cargo.

To contractors and other industrial u it means greater work output f higher-powered engines or impro economy.

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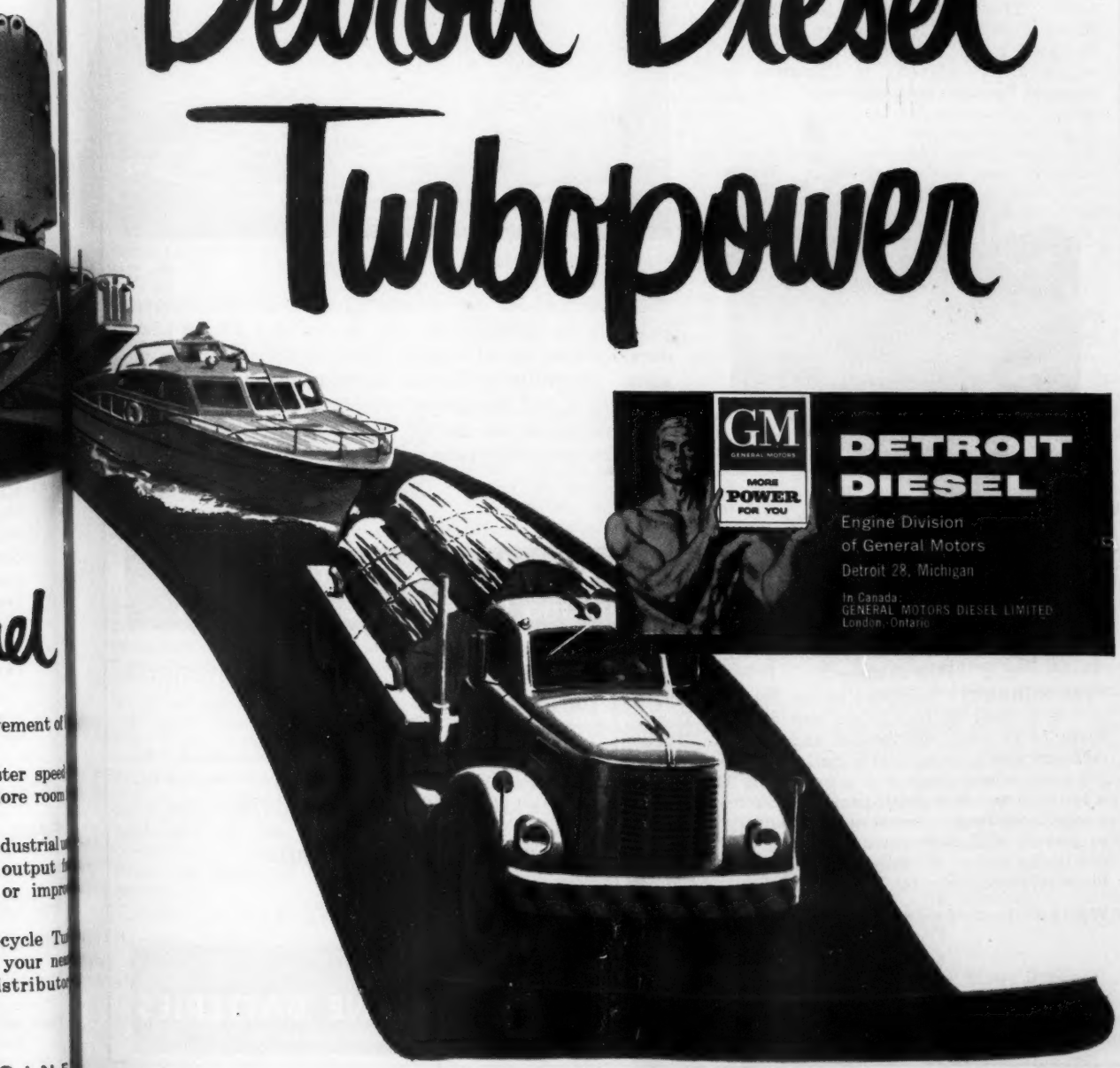
Gresew Engines Added
to General Motors 2-cycle Diesel Line

Detroit Diesel Turbopower



Surrette

World's Finest Marine

BATTERIES

Aboard All The Steel Trawlers Owned and Operated Out Of Boston By U. S. Shipbuilding Corp.

All four steel trawlers of the U. S. Shipbuilding fleet (the largest and newest trawlers operating out of Boston) are equipped with SURRETTE Marine Batteries. These trawlers . . the Phantom, Racer, Comet and Swallow are owned and operated by U. S. Shipbuilding Corp. of which J. A. Klevens is President and Howard Francis, port engineer.

The trawlers have 120-volt GTNS-21 Giant Size Surrette Batteries for lighting and ship service and HR-19 heavy duty Surrette Diesel starting batteries for the winch engines. The batteries handle a maximum electrical load, including a full complement of electronic gear, electrical refrigeration for the galley, miscellaneous electric motors and numerous other pieces of electrical equipment.

Here's The Reason Why Surrette Marine Batteries Are The Choice Of U. S. Shipbuilding Corpn., Yonkers, N. Y.

Writes Mr. Howard Francis, Port Engineer:

"The SURRETTE batteries in our fleet have been in use as long as four years and we have found them to be very serviceable and reliable. Their compact size is particularly desirable aboard fishing boats where space is at a premium. They pack a lot of power in a small package. Surrette's hard rubber case really stands up; the battery is better protected, will shed water and is not apt to short out in the trays. We also like the good service we have received from the manufacturer."

Leading builders and operators choose SURRETTE BATTERIES.

Why don't YOU benefit by their experience. Remember that Surrette Batteries are the finest that can be had regardless of prices . . and when you consider their longer life you pay far less for SURRETTE MARINE BATTERIES.

Write for free literature or the name of your nearest distributor.

Surrette MARINE BATTERIES

JEFFERSON AVENUE SALEM, MASSACHUSETTS

FISHERY PROGRESS

► Senate Passes Magnuson Bill

The Magnuson Fisheries Bill (S3275) was unanimously passed by the Senate on May 24, culminating a year's effort to strengthen administration of fisheries in the Federal Government. It provides for the establishment of a United States Fisheries Commission headed by an Assistant Secretary of Interior for Fisheries. All fishery functions of the Fish & Wildlife Service would be transferred to the new Fisheries Division, and all policy matters would be determined by the Commission.

Hearings have been held on a new House fishery reorganization Bill, HR 11570, introduced by Congressman Herbert Bonner, (N. C.) chairman of the House Merchant Marine & Fisheries Committee. While similar to the Magnuson Fisheries Bill, it would eliminate the proposed Fisheries Commission and instead provide for an Under-Secretary of Fish and Wildlife and two Divisions. One would be a Fisheries Service and the other a Wildlife Service, each having a Director and two Assistant Directors.

► Fishery Tariff Concessions

Tariff concessions which United States has obtained and granted in four months of tariff bargaining with 21 other countries at Geneva were announced recently by State Department.

United States agreed to reduce tariff rates on variety of fishery products, article of greatest importance in terms of import trade being canned smoked sardines valued at over 30 cents a pound. Tariff on this article is to be lowered from 15 percent ad valorem to 14 percent ad valorem on June 30, 1956; to 13½ percent ad valorem on June 30, 1957; and to 12½ percent ad valorem on June 30, 1958.

Other canned fish on which tariff reductions were granted by U. S. are smoked sardines valued at over 18 but not over 23 cents a pound, antipasto, fish cakes, and canned herring snacks and tidbits. U. S also agreed to bind present rate on canned bonito in brine.

In direct negotiations, concessions were obtained by United States for certain fishery export commodities, including canned salmon, canned shrimp, and canned oysters. Concessions granted to U. S. vary widely in depth, and many are deeper than 15 percent which was maximum limit governing almost all U. S. concessions.

► Payne Fisheries Education Bill

S. 2379 by Senator Frederick Payne of Maine, which would provide for training of fishery scientists, technicians, and teachers, passed Senate on May 21. House hearings on bill were held June 6.

The measure would provide for Federal expenditure of $550,000 annually for college training and $550,000 annually for secondary and vocational school training. The bill would authorize expenditure of this money only when each State matches Federal contribution.

► Jap-Russian Salmon Fishing Pact

Operations of Japanese salmon fleet during 1956 season in Soviet waters off Siberia have been restricted by newly-signed agreement. This puts quota of about 65,000 tons on Japan's salmon fleet, an increase over original limit of 50,000 tons, but far less than record 1955 catch. New agreement ends prospect that large quantities of Nipponese pinks will be sold in United States.

In addition to interim salmon-fishing agreement, Russian and Japanese ministers signed 10-year fisheries treaty and 3-year sea-rescue agreement. Both of these agreements will go into effect when Russo-Japanese peace treaty is negotiated.

► Interior Dept. Appointments

President Eisenhower has appointed former Senator Fred A. Seaton of Nebraska as Interior Secretary. He replaces Douglas McKay, who resigned from the cabinet to run for Senator.

Arnie J. Suomela of Portland, Ore. has been promoted from Assistant Director of Fish and Wildlife Service, in charge of fisheries, to a recently created post of Associate Director. In his new capacity, Mr. Suomela will serve as general deputy to Director John L. Farley in supervising over-all activities of Fish & Wildlife Service.

► Tariff Commission Investigation

Five representatives of U. S. Tariff Commission have been in New England recently interviewing fishermen, vessel owners, heads of fish processing and fish stick operating firms, union officials, and others as part of investigation being made of groundfish fillet industry.

Both sides of controversial tariff issue were to be aired before Tariff Commission in Washington beginning June 5. Representatives of producing organizations in New England will appear on behalf of their petition, requesting that quotas be placed on imports of groundfish fillets, while representatives of distributors and importers will appear in opposition to the petition.

► Great Lakes Commission Meets

The International Great Lakes Fisheries Commission, which held its organizational meeting recently in Ottawa, gave attention to lamprey problem. It was recommended that lamprey control network should be completed on Lake Superior this year. This would call for 10 to 20 more electrical barriers on Canadian side and six on United States side. In addition, the Commission will this year build 55 barriers on Lake Michigan.

John L. Farley, director of the Fish & Wildlife Service, is chairman of Great Lakes Fisheries Commission.

► Upwelling May Affect Tuna

A greater than usual upwelling of water in mid-Pacific and its possible effect upon tuna fishery of that area are being closely watched by Fish and Wildlife Service. Objective of research is to find out where drifting mass of fertile water, with its cargo of developing plant food, will be when it becomes good tuna feeding ground. Fish & Wildlife Service officials believe that if this objective is achieved, predicting location of a good tuna fishing area will be possible.

► Haddock Landings Show Gain

The International Commission for the Northwest Atlantic Fisheries recently reported that haddock landings in the Northwest Atlantic area during January and February of this year were twice as high as in 1955.

However, 1955 cod landings in Northwest Atlantic were smaller than those of 1954, but higher than in 1953. The area is fished annually by hundreds of ships from Canada, the United States and several European countries. The Commission reported the cod production decline was most pronounced for Newfoundland area.

► Study Territorial Seas Situation

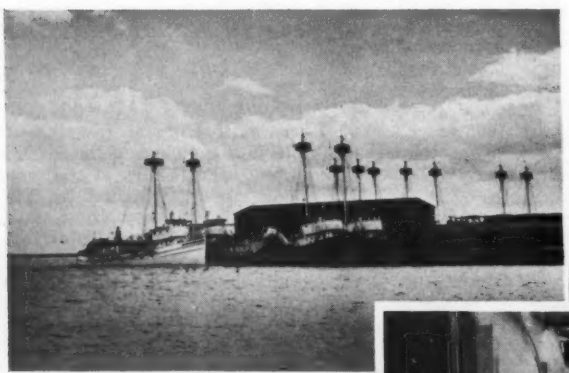
Grouping together systematically in a single report of all rules adopted by it in respect of high seas, territorial seas, continental shelf, contiguous zones, fisheries and protection of living resources of sea, were among tasks before United Nations International Law Commission (ILC) at its eighth session, which was expected to end about June 29 in Geneva. The Commission's 15 members are recognized International law experts elected by General Assembly.

► Oyster Pack Shows Drop

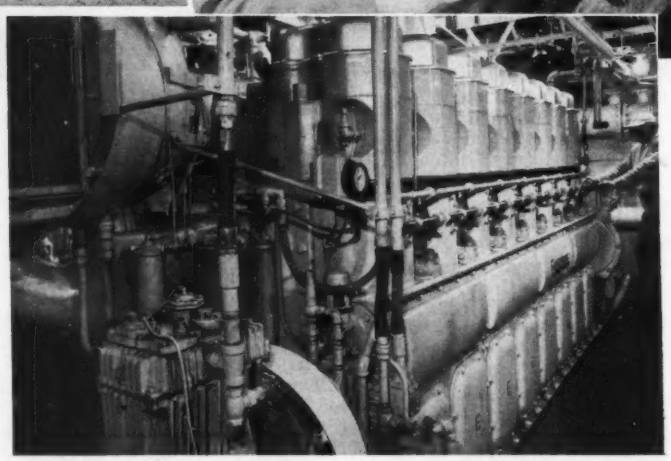
Gulf of Mexico oyster pack during week ending May 5 was 8,094 cases, which virtually wound up a season that produced around 17% less.

"Fast-handling, trouble-free, smooth-operating —*that describes our Enterprise 800 H.P. Diesels!*"

Says Captain HUDNALL HAYNIE, skipper of the PARRAMORE BANKS since her commissioning in May of 1955. Powered by a big Enterprise Turbocharged DMG-38, rated 800 at 400 RPM, this steel-hulled fishing boat is the most recent addition to the Fish Products Company fleet.



The "Parramore Banks," shown with several of her sister ships at the Lewes, Delaware dock of Fish Products Company, is owned by Smith Enterprises, recognized as the largest fishery operators in the world. Of their 27 menhaden boats, 19 are powered by Enterprise Engines.



Second Engineer Earl Davis, pictured at the controls of the 8-cylinder Enterprise. When the fish are running the engine is often worked 15 to 22 hours a day, 7 days a week! This means that the speed delivered by this engine of about 12 knots or better, plus its trouble-free operation, are all-important.

"The engines in fishing boats take a beating," states Captain Haynie, veteran skipper of 27 years. "We do as much backing and filling as most tug boats. Much of this is in picking up the purse boats that carry our nets, sometimes as often as 10 to 12 times a day.

"This is a tricky business on an open sea. It takes a quick-handling engine that delivers the speed and direction we want—when we want it. Sometimes the lives of the 25 men in those purse boats depend on that. Within a few seconds after I signal, the Enterprise Engine switches direction. No hand-winding of cams into position for change of speed or direction. The Enterprise is completely automatic... simple and easy to operate.

"Space can also be a problem on a fishing boat," comments Captain Haynie. "The Enterprise we've got on board is at least 25% smaller than engines of equal HP which I used 10 and 15 years ago. That means an increase in our carrying capacity... and our earning power."

This kind of record can be yours, too, with Enterprise. Models from 73 to 7703 HP for every marine application. Write or call us today.

The Parramore Banks was built by RTC Shipbuilding Corporation, Camden, N.J.

Over a million horsepower at work the world over!

ENTERPRISE
dependable **ENGINES**

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Mid-Water Trawls to Be Tested in Pacific

Research vessel "John N. Cobb" to fish experimentally with British Columbia herring trawl and other mid-water nets*

IN recent years mid-water trawls have been used successfully in Europe and in British Columbia for herring. Now experiments are to be carried out off the coasts of Washington and British Columbia by the research vessel *John N. Cobb* to determine if fish such as Pacific Ocean perch, cod and others which spend at least part of their time off the bottom, can be efficiently taken by mid-water trawling.

The *John N. Cobb*, a Fish & Wildlife Service vessel, was scheduled to leave Seattle, Wash. on May 14 for six weeks of mid-water trawling. In addition to the British Columbia mid-water herring net, several sizes of mid-water trawls made at the Fish & Wildlife Service's gear research station at Coral Gables, Fla., will be fished experimentally. These nets, both nylon and cotton, range from 30 feet to 50 feet square opening at the mouth.

A Sea Scanar will be used by the *John N. Cobb* to locate schools of fish, and special attention will be given to rocky bottom areas off Washington and Vancouver Island which are too rough for bottom trawls. To keep the trawl at proper depth, a new telemetering instrument developed at the University of Miami Marine Laboratory will be employed. The instrument attaches to the trawl or trawl cable and sends out continuous battery-activated sound impulses to a hydrophone streamed by the vessel. Depth of the trawl is calculated from the frequencies of the signals received.

Arrangements have been made for gear experts from the Biological Station of the Fisheries Research Board of Canada at Nanaimo, B. C., to join the *John N. Cobb* for part of the cruise to try the successful Canadian mid-water herring trawl in offshore waters and to compare the operation of the Canadian trawls with those furnished from Coral Gables.

Development of Canadian Net

The application of mid-water trawls for capturing herring is a relatively new venture in British Columbia. During the Winter months of 1950, Capt. N. Nelson, skipper of the vessel *Combat*, built the first successful mid-water trawl mainly from used salmon seine netting and was successful in catching a few tons of herring in Gasboat Pass in northern B. C. waters.

Later in 1951, the *Combat* used a modified version of the Danish "Larsen" trawl and made successful catches of herring in Gasboat Pass. In the Fall of 1953, four more Canadian trawlers fished with the type of net used on the *Combat*. At that time some of the trawlers modified their nets, constructed different types of otter-boards, and added kites of various designs to spread the mouth of the net. However, the vessels met with no success in Myers Pass and Chismore Pass in the Fall of 1953. Although they had been successful in the Spring, no further attempts were made to pursue the fishery because of the complete failure of their efforts in the Fall months.

It was during this period in 1953 that a request for assistance in the development of a mid-water trawl was made by fishermen to the Fisheries Research Board of Canada. Trawl-net fishermen met with representatives of the Board and formed a committee composed of experienced fishermen to advise on the program of experimentation. One member of the committee, W. W. Johnson, was employed by the Fisheries Research Board to design and construct the necessary gear for a mid-water trawl.

Opinions expressed by the Canadian fishermen who had been actively engaged in mid-water trawling centered chiefly on two important features for consideration and experimentation. A net of larger proportions than that which had been used previously was believed to be essential. Also, means had to be found to prevent or minimize the scaring of herring schools by the ordinary otter-boards in front of the mouth of the net. In an attempt to overcome these two main obstacles, a nylon net was constructed and curved otter-boards, suspended from steel wire pennants, were developed to spread the mouth of the trawl net (Fig. 1).

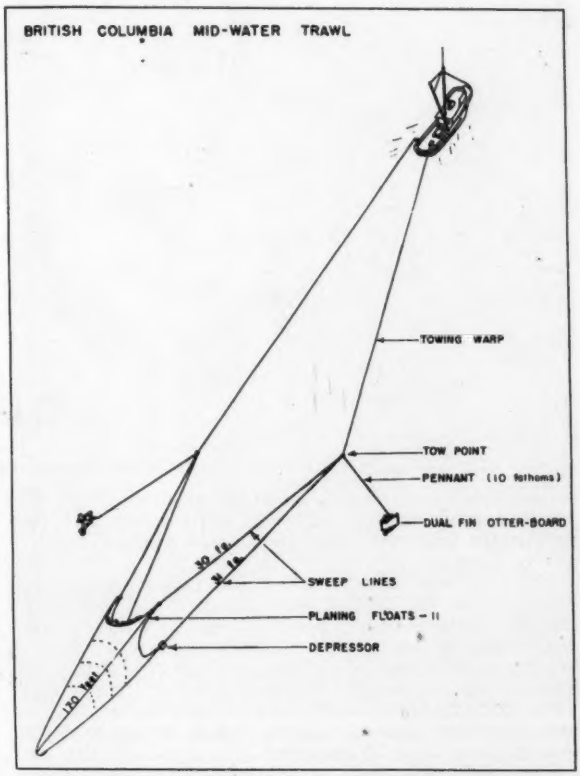


Fig. 1—British Columbia mid-water trawl being towed.

To make it possible for a vessel with moderate power (150 to 175 hp.) to handle the larger net, it was necessary to increase the water flow through the netting by decreasing the diameter of twine in each mesh and so decreasing the resistance of the netting in the water. Nylon twine was the only material available that could be used with smaller diameter and yet retain the strength of the cotton twine that had been used previously.

Single-knot nylon web was used in all meshes of the netting. Concerning mesh size, it was expressed by some fishermen that an increase in size of mesh from that used in former nets, was desirable, particularly in the body and wing sections. Accordingly, four sizes of mesh were used in the trawl—5 inch, 4½ inch, and 3½ inch in the wings and body and 1¼ inch in the cod-end. All mesh sizes are stretched dry measure, center of knot to center of knot.

Make Big Catches at Night

Experimental fishing was conducted from the chartered vessel *Sea Pride II*, skippered by Capt. Norman Sigmund. This 62' Canadian trawler was equipped with

* Material on the British Columbia mid-water herring trawl is based on a progress report of the Fisheries Research Board of Canada, Pacific Biological Station, Nanaimo, B. C.

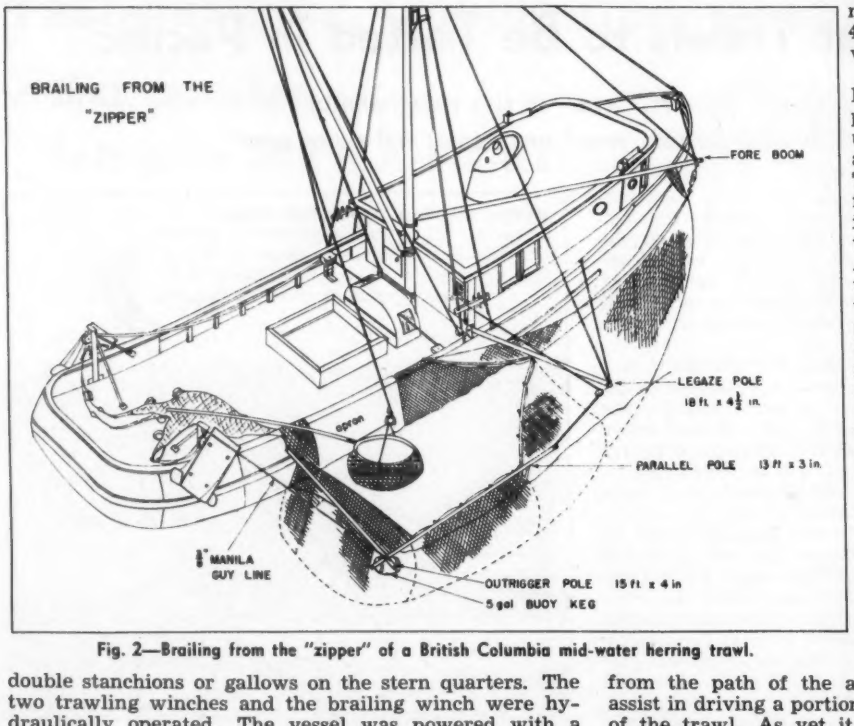

BRAILING FROM THE "ZIPPER"
FORE BOOM
LEGAZE POLE 18 ft. x 4½ in.
PARALLEL POLE 13 ft. x 3 in.
½" MANILA GUY LINE
OUTRIGGER POLE 15 ft. x 4 in.
5 gal BUOY KEG

Fig. 2—Brailing from the "zipper" of a British Columbia mid-water herring trawl.

double stanchions or gallows on the stern quarters. The two trawling winches and the brailing winch were hydraulically operated. The vessel was powered with a 170 hp. Diesel.

The mid-water trawl was found to be very effective at night, just as the herring were rising off the bottom and during the period just before daybreak as they were descending to the bottom. Catches of 20 to 30 tons of herring were made in six different tows in Trincomali Channel and in Satellite Channel at night. These drags were 15 to 20 minutes in duration and were made on herring schools located entirely off the bottom at depths ranging from 15 to 35 fathoms.

One catch estimated at 100 tons burst the cod-end shortly after the net was surfaced, probably because of the excessive towing speed while winching in the sweep lines. The net was designed to catch between 50 and 60 tons of herring. The actual depth of the herring in the schools varied from 5 to 10 fathoms.

Catches in the daylight were much lighter (averaging one to two tons) than those made during the night. During the daylight most of the herring schools were very close to the bottom or concentrated right on the bottom. It was therefore difficult to make tows as successful in the daylight as at night. However, two daylight drags on a large concentration of herring at depths between 45 and 50 fathoms in mid-water in Captain Passage yielded 15 and 35 tons of herring. All the herring caught appeared to be in good condition and very little loss of scales was noticed.

Handling the Net

When the school of herring was located with the echo sounder the Canadian trawler *Sea Pride II* proceeded to a distance beyond the school (just far enough to set the gear to the correct depth), turned about, and reduced speed to slow ahead before setting the gear. The cod-end was dumped directly over the stern. The body and wings which followed, slid readily over the canvas-covered stern railing. As the sweep-lines were paid out from the winches, the effect of the depressors which were shackled to the lower sweep-lines at the corners of the wings could be seen as they hit the water. The depressors immediately submerged the lead-line and the two lower wings beneath the surface of the water. After 20 fathoms of sweep-line had been paid out slowly and all the planing floats were functioning, the mouth of the net opened almost to its full extent (about 40 feet in height x 30 feet in width).

The otter-boards were shackled quickly to the ½" wire pennants, as the latter were unwound from the winches along with the sweep-lines. Then the boards were let out first at towing or fishing speed in order to clear the stern of the vessel, then at full speed. At this point the remainder of the pennants and sweep-lines were unwound from the winches and passed smoothly over the blocks on the stanchions. The speed of the trawler was now reduced to the required fishing speed (about 3 knots). This was slightly less than the full speed attainable with the net and gear in tow.

Opinions vary as to the length of the pennants from the towing point to the otter-boards. It was the suggestion of the Canadian investigators and crew members that otter-doors attached to a long towing pennant 10 fathoms or more, tend to prevent the herring from being driven from the path of the approaching net, and even may assist in driving a portion of the school toward the mouth of the trawl. As yet it has not been determined with certainty whether shorter pennants are as efficient or more efficient than the 10-fathom pennant in opening the mouth of the trawl. However, it was proved in practice that doors on pennants were far more efficient than the conventional method whereby they are attached directly to the sweep-lines.

Wire Angle on Towing Warp

The depth of the tow-point in the water could be determined readily from the angle of the towing warp over the stern of the vessel. A carpenter's bevel protractor was used to measure the wire angle. The bottom of the net was found to be fishing from six to seven fathoms below the depth of the tow point. This depth was determined by sliding bathythermograph (an instrument used to obtain a continuous record of temperature at various depths in the ocean) down a stainless steel trolling wire which was attached to the center of the lead-line. As the trawl gear was set out to greater depths the trolling wire was paid out from a small winch over the stern. The instrument also was passed down the towing ways to check

(Continued on page 32)

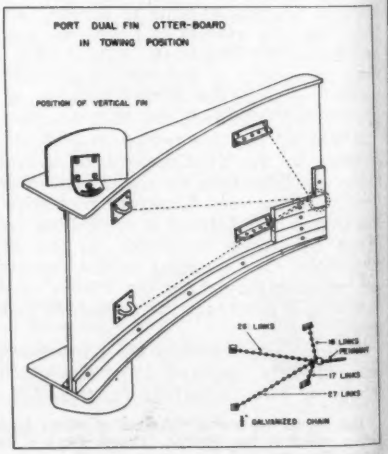


Fig. 3—Dual fin curved otter-board and galvanized chain bridle used with the British Columbia mid-water trawl. The board is constructed from two sheets of ⅜" thick laminated plywood, and measures 5½' long and 3' in height. Horizontal stability of the board in the water is provided by two horizontal upper and lower fins, while two adjustable vertical fins help in maintaining the correct angle of attack of the otter-board.

Loran is Useful Navigation Tool

Aids fishermen in finding productive grounds, and permits distressed boats to give accurate positions to rescue ships*

ALL in all, in the ten years since the Navy took Loran off its secret list, there has been a quiet revolution in navigation at sea. Everyone has gotten into the act. Even smaller craft are discovering that the electronic aid not only provides them with a greater margin of safety, but that it is actually economically cheaper to use Loran to help them pick their way across a darkened sea or make a pinpoint landfall along an obscured coast.

Perhaps the greatest boom for Loran equipment today, according to a recent Coast Guard survey, is among the nation's fishing fleets, particularly in New England. The reason for such popularity in the fishing industry is not hard to fathom. With Loran on the bridge and a little luck riding with him, a trawler captain can find his way quickly to the week's prize fishing grounds, stay there until he catches his full quota (with no fear of losing his bearings should a heavy fog roll in) and then find his way home again with scarcely more than the twist of a dial. As a result, Loran-equipped trawlers are making bigger catches and logging more voyages per season.

Whereas the man in the charthouse previously had to depend upon dead reckoning for days on end in dirty weather, estimating as best he could the sometimes capricious effects of wind, current, and poor helmsmanship, he now merely has to flip on his Loran set and take a look. From the bouncing green "blips" he can get himself a reliable fix in a few minutes no matter how overcast the sky, how fogbound the surface, or how rough the sea.

Whether or not a vessel has a Loran set aboard can sometimes mean the difference between rescue and tragedy. In one instance off the coast of New Jersey not long ago, a disabled trawler was able to get her exact position from Loran, relay it to a shore station, which in turn relayed it to a Coast Guard cutter. The cutter personnel plotted the position on their chart, took a Loran reading to determine their own position, connected the two points and set a precise course through the seething swells of the storm to locate the foundering trawler.

High Degree of Accuracy

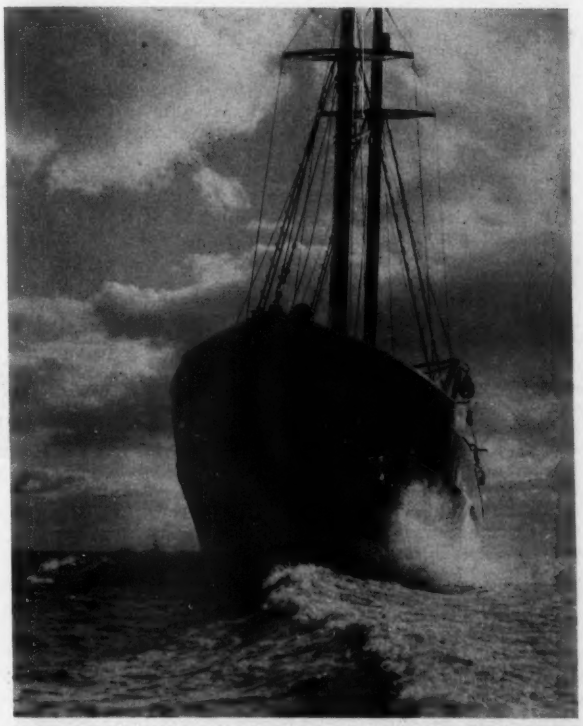
Just how accurate is a Loran fix? Experience to date provides a good rule of thumb. A fix is accurate approximately to one percent of the distance of the navigator from the transmitting pair of stations. For example, a navigator aboard a ship 1,000 miles from the transmitter should be able to get a fix accurate to within ten miles. A navigator closer to his source, say at 100 miles, should get a fix accurate to within one mile. This margin of error compares favorably with that of celestial fixes.

Loran is speedy, too. With a little practice a shipboard operator can get himself a three-station fix in three minutes or less.

But perhaps the most interesting characteristic of Loran is its complete freedom from distracting influences around it. Magnetic and electrical gear near at hand have no effect. It operates independently of the ship's magnetic and gyrocompasses as well as of the chronometer and other mechanical devices. It requires no special calibration that cannot be handled easily by the operator. It is not affected by the arrangement of topside equipments like booms, ventilators, or radio direction finder.

Finally, Loran is little disturbed by bad weather. This is probably its most redeeming feature and the one which makes it extremely valuable in times of distress at sea. When radio direction finders are giving faulty readings, when compasses are swinging wildly, and when radio sets are burping static, Loran works faithfully.

*This material was excerpted from an article by Lt. Arthur P. Miller, Jr., USNR, published in a recent issue of the "United States Naval Institute Proceedings," and was copyrighted in 1955 by the U. S. Naval Institute.



Harry S. Brody's 87' dragger "Clipper", which has been fishing out of New York. She was built as "The Clipper Fish" by Harvey Gamage, So. Bristol, Me., in 1946, and since has been renamed "Clipper". She is skippered by Capt. Edward Silva, and powered with 400 hp. Enterprise Diesel. Finished with Henderson & Johnson paint, using Essomarine oils, she is equipped with Exide batteries, Columbian propeller, RCA radiotelephone and Raytheon "Fathometer".

Construction of Loran stations is picking up. After a post-war period of consolidation, when several off-track stations were eliminated, construction of Loran stations is enjoying a second, but milder, boom.

The worldwide picture today is this: 56 stations cover virtually all the North Pacific and North Atlantic areas. Of this total, 45 are maintained by the United States, six by Canada, three by Denmark and one apiece by Great Britain and Iceland. There is no Loran coverage south of the Equator, even along well-travelled routes like those around South America and Africa.

Most of today's Loran receiving equipment aboard ships or planes is basically of World War II design. Some of the manufacturers have come up with several refinements such as "automatic pulse matching" and "direct reading" presentation which enables the navigator to see at a glance what his reading is, but the main trend is merely toward making sets more reliable electronically, more compact, and more adaptable to the specific type of ship.

Getting a Loran "Fix"

To get his Loran line of position, the navigator tunes his receiver to the selected station and watches as two closely spaced blips appear on the scope. These two blips come from a "pair" of stations in the general area; one from the "master" station, the other from the "slave" station.

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Commercial Fishing in World's Largest Lake

Fishermen of Lake Superior catch mainly whitefish, lake trout and herring; operate in open water about nine months of year

LAKE SUPERIOR is not only the largest lake in the world, but also the greatest producer of lake trout. It is said that no lake on the face of the globe can touch its productive qualities for trout—not even great Slave Lake in the Northwest Territory of Canada, another heavy trout producer.

In 1953, for example, commercial fishermen of Lake Superior harvested a total of 2,413,000 lbs. of lake trout, compared to an average annual catch of 2,040,000 lbs. from 1909-1923, and 3,021,000 lbs. from 1924-1947. Lake Suprior's 1953 trout catch was worth $1,032,000.

Of the Great Lakes, Lake Superior is the largest, deepest and coldest, with a mean temperature below surface of approximately 40 degrees F. Its eastern and northern waters are under the jurisdiction of the Province of Ontario. Those on the southern shore are controlled by the States of Michigan and Wisconsin, and those on the west by Minnesota. Receiving waters of Lake Nipigon in Ontario, and those of hundreds of streams which flow into the lake from the northern side, Lake Superior drains through St. Mary's River into the North Channel at the eastern end.

Commercial fishermen unloading a good catch of lake trout at Marquette, Mich. The fishermen's dock lies in the background.

In shape the lake is broadly crescentic, with a length of 355 miles and a width in the western half of approximately 70 miles and in the eastern half varying from 90 to 110 miles. It has an area of approximately 32,000 square miles.

The wider body of Lake Superior is over 100 fathoms in depth, though a sounding of 196 fathoms has been reported. On the outer curve of the crescent the shore is precipitous. At many points the 100-fathom depth can be reached within two miles of land. The bottom slopes more gradually from the southern shore, where a 50-fathom contour is an average of five to six miles lakeward.

There are a number of bays and large islands in the lake. In and around these fishing conditions are more tempered than in the lake itself. But these areas are relatively insignificant, for the only important stretches of shallow water lie in the vicinity of the Apostle Islands, Whitefish Bay, and in the bay region along the north shore. The shores are mostly rocky, except on the south, where there are broad stretches of sand, gravel, and clay. In the deeper parts most of the bottom is clay.

Nets being repaired by Matt Anderson, a Marquette, Mich. commercial fisherman.

Whitefish, lake trout and herring are the principal varieties of commercial fish caught in Lake Superior, while smelt, white and redhorse suckers, burbot and several other species are considered rough fish. These latter varieties, however, also are taken in large commercial quantity.

Using set hooks, gill nets, pound nets, trap nets, seines, and hand trolling lines, Lake Superior's commercial fishermen operate in open water about 9 months of the year. In mid-Winter, some of them fish through ice on bays and not far out from shore, while others lay up boats and equipment during the ice season to make repairs and mend nets.

Gill nets hanging vertically in the lake, much the same as tennis nets, are selective in taking only certain sizes of fish. They are divided into two general sizes of mesh. The larger mesh of 4½" and over is used for taking lake trout, whitefish and pike. The small-mesh gill nets of from 2½" to 2¾" are used in taking herring, perch and smaller whitefish. The use of a still smaller mesh of 2¼" is permitted for taking blueback herring from waters of Lake Superior and Green Bay in Lake Michigan, while even smaller-meshed gill nets (1½" to 1¾") are allowed for taking smelt under special permit. Gill nets having meshes of 1¼" to 1¾" may be used for taking bait for use in baiting trot and set-hook lines.

Pound nets, trap nets, fyke nets and hoop nets are designated as impounding nets, and all operate on the principle of trapping fish alive. This is done by forcing the fish to follow a lead stretched on or near the bottom of the lake into the final trap designated as the crib or pot of the net.

Pound nets are those having open tops on the cribs where the webbing extends above the surface of the water. This type of net must be secured to the lake bottom by means of long stakes, and for that reason has to be used in comparatively shallow water.

Introduction of the deep trap net in the late 1920's resulted in huge catches of whitefish and threatened possible extinction of the species. To preserve the fishery, legislation was enacted confining large-mesh pound nets and trap nets to a depth of not more than 80', and prohibiting the use of such trap nets in Lake Michigan and Superior. At present, however, a modification of the deep trap net is allowed in these lakes. It permits pots of less than 15' in depth. They may be set up in water not over 50' deep.

Fyke and hoop nets are constructed on the same general principle as small trap nets.

Marquette and Grand Marais

Marquette's commercial fishing industry, though faced with many problems, has operated continually for more than a century. Fifteen or more vessels fish out of Mar-

quette, and as many as 50 persons are employed at times handling and processing fish for market.

At Grand Marais, Mich., another important Lake Superior commercial fishing port, Endress and Masse Fish Co. is credited with over 80 years of fishing in Lake Superior waters, near and in the vicinity of Grand Marais. The queen of the firm's fleet is the *Badger*.

Endress and Masse is the last fishing firm left in the village that began operations at Grand Marais in the early days. C. Endress, who came to the U. S. from Germany in 1854, located in Two Rivers, Wis., and entered the fishing business. His son, Emil G., began fishing when he was 13 years old, and before he had become of age was taken into partnership with his father. It was Emil who first located at Grand Marais, Mich., and in the Whitefish Point area. The value of the Endress fishing fleet in 1895 was estimated at $70,000—quite a fortune in those days.

Ora O. Endress, son of Emil, began his fishing career as did his father at a very early age. By the time he was 20 he was operating a boat of his own, and managing the company's affairs in the Grand Marais and Whitefish Point areas. In 1918, upon death of his father, Ora took over management of the business. Not long after that he became partners with Jim McDonald and Parmer Masse, and fished with them for a period.

In 1924, however, Enos Petitpren bought a partnership in the Endress Fish Co., as did Parmer Masse, forming

Archie Frazier, a Marquette, Mich. commercial fisherman, is dressing fish while returning from lifting gill nets.

the Petitpren & Endress fishing firm. Enos Petitpren, who came to Grand Marais in 1889, had fished independently before then. In 1926, his son Henry bought into the company. Upon the death of Enos in 1930, the name was changed to the Endress, Petitpren & Masse Fish Co.

In 1938, Henry Petitpren sold his share to Endress and Masse, and formed his own retail fish market. The firm then became known as Endress & Masse.

During the later years another Endress, Ora Jr., grew up with the fish business as did his father and grandfather before him. As a lad he worked during Summers on the dock, crushing ice and doing other shore jobs. Upon his father's death in 1948, Ora, Jr. assumed partnership in the Endress and Masse Fish Co.

Notwithstanding the ups-and-downs of the fishing business, Grand Marais is still one of the busiest ports during Spring, Summer and Fall. In Winter, however, ice blocks the harbor as it does in many other Lake Superior ports, curtailing operations considerably.

Before a railroad was constructed into Grand Marais, the fish were shipped by boat to various markets, some salted in large barrels and some packed fresh in ice. Now fish are taken by truck to Seney, Mich., the nearest shipping point, and dispatched by rail from there to Chicago.

Hauling in a fish by gill net lifter aboard the Lake Superior fishing tug "Peter A".

Brown Fisheries Date Back Hundred Years

Located at Whitefish Point, Mich., not far eastward from Grand Marais, are the Brown Fisheries, considered to be the largest fish producers and wholesalers in the Upper Peninsula. Tom Brown owns and operates the Brown Fisheries, and like his brothers, is a member of a fishing family whose operations on the Great Lakes date back over 100 years.

The Brown firm has plants in Manistique and Grand Haven, Mich., as well as at Whitefish Point. Brown is primarily a whitefish and lake trout producer, and his fishing tug *LaBelle* operates on both Lakes Superior and Huron, setting and lifting as much as eight miles of gill nets daily.

Despite the scarcity of lake trout compared to other years, Tom Brown has greatly expanded his operations. He has much faith in the future of the Great Lakes fishing industry, and has pointed out all along the urgent need for additional fish hatcheries and rearing ponds to aid nature in replenishing its supply of lake trout in Lakes Superior, Huron, and Michigan.

Brown planted 400,000 lake trout fry in 1947 along the shores of Whitefish Bay. In 1952, along the same shores where he had planted the minnow-size trout, his fishing crews netted lake trout in greater numbers than they had seen in years. The trout, ranging in weight from 1½ to 2 lbs. each, were evidence that the planting paid dividends.

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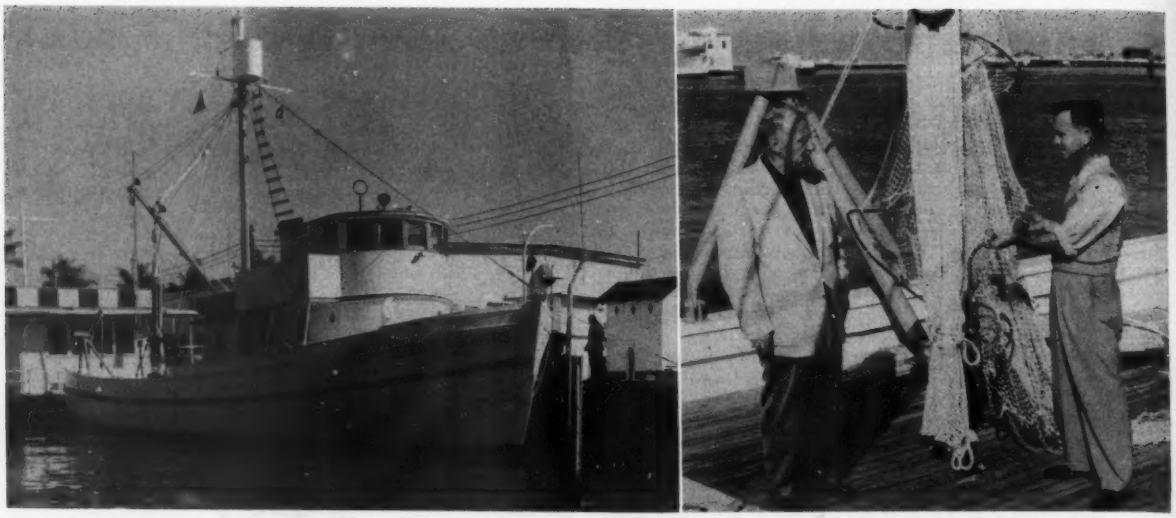
Two Lake Superior commercial fishermen unloading gill nets at Marquette, Mich.



New 73' shrimp research vessel "George M. Bowers", with Richard McNeely, left, electronic specialist for the Fish & Wildlife Service, and Spencer Ware, Sales Manager, Eastern Div., Buda Co., examining one of her nets.

Deep-Water Red Shrimp Taken in South Atlantic

Chartered research boat "Pelican" makes first hauls off Florida; new floating laboratory "Bowers" exploring continental shelf

A DOUBLE-BARRELED program aimed at locating commercially valuable shrimp resources in the offshore waters of the Atlantic coast south of Cape Hatteras has been put into operation by the Fish & Wildlife Service, using Saltonstall-Kennedy funds. Exploration of the continental shelf (inside 100 fathoms) is being carried out by the new fishery research vessel *George M. Bowers*, while the deep-water phase of the program is being done by the *Pelican*, a 74' steel hull shrimper under charter from Gulf-Caribbean Seafoods, Inc.

Already the first deep-water red shrimp taken by a fishing vessel on the South Atlantic coast have been landed at Jacksonville by the *Pelican*. Presence of deep-water red shrimp on the Atlantic coast is of special interest to the fishing industry because the shellfish, if found in commercial quantities, could be caught by specially-rigged shrimp vessels during the season when shrimp are not available in inshore waters.

Catches Made at About Two Hundred Fathoms

The deep-water trawling phase of the South Atlantic Fisheries Exploration Program was initiated by the *Pelican* during March. In a series of 15 deep-water trawling stations off Ft. Pierce and Cape Canaveral, Fla., using 40' flat shrimp trawls and a 10' beam trawl, large deep-water red shrimp were caught in all drags between 180 and 235 fathoms.

Catches of shrimp ran from 5 to 20 pounds per 2-hour drag. A 4½-hour drag off Cape Canaveral using an 80' balloon trawl caught 125 pounds of red shrimp of mixed sizes averaging 26-30 count heads off. Numerous problems were encountered in trying to trawl in the strong Gulf Stream current. Attempts to drag against or across the current were unsuccessful. Excellent trawling bottom was found between Ft. Pierce and Cape Canaveral, but on a drag southeast of Ft. Pierce the trawl hung up on a rock "edge" and the vessel almost capsized before the trawling warp parted.

A series of 5 drags were made in depths of 21 to 80 fathoms between Lake Worth and Cape Canaveral. One pound of 10-count mixed brown shrimp and pink shrimp were caught in one-hour day and night drags in 21 fathoms southeast of Cape Canaveral.

Flat Shrimp Trawl Used

In April, deep-water exploratory shrimp trawling by the *Pelican* extended from Cape Canaveral to off Savannah in depths of 138 to 250 fathoms. All drags were made with a 40' flat shrimp trawl using a single trawling warp and bridle.

Between Cape Canaveral and St. Augustine seven 4-hour drags in depths of 150 to 212 fathoms caught 20/30-count red shrimp at rates of about 40 pounds per drag. The largest catch—70 pounds—was made in 150 to 156 fathoms off False Cape, Fla.

North of St. Augustine increasingly rough bottom was encountered. Three of four drags made off Jacksonville resulted in gear damage and no shrimp catch. The other drag caught 45 pounds of 16/20-count red shrimp.

The *Pelican* was especially rigged for deep-water trawling, with the installation of stern davits and a Hathaway winch holding 800 fathoms of wire. Other special equipment includes an RCA Echograph for recording the water depth. There also is a thermometer device on the fantail of the vessel, as it is important to know at what temperature the shrimp are schooling. The ocean's surface temperature and that of the bottom varies from 16 to 20 degrees.

Skipper of the *Pelican* is Capt. Hilton Floyd of Mayport, Fla., and his crew is unusual in that each man has commanded a shrimper before. Included are Clifford J. Armstrong of Jacksonville, engineer; William Parnell, Jr. of Mayport, cook-fisherman; and Harry Widincamp of Townsend, Ga., fisherman.

Exploration of Continental Shelf

The continental shelf phase of the South Atlantic shrimp exploration program is being carried out by the *George M. Bowers*, Capt. Alvin Morgan, which operates

(Continued on opposite page)

out of Miami, Fla. During Cruise No. 2 of this vessel, which covered the area from St. Augustine to Wilmington, N. C., thirty-seven 1-hour drags using a 40' flat trawl were made in depths of 14 to 45 fathoms. Commercial shrimp species were caught in only two of these drags. Three individual brown shrimp were caught in 22 fathoms off Savannah, and 3½ pounds of 10-count brown shrimp were caught in a 1-hour drag in 40 fathoms off St. Augustine. Two 80' balloon trawl drags in this area were unsuccessful in reaching the bottom.

Small quantities of rock shrimp, a non-commercial species, were caught in 17 of the 18 night drags and in 6 of the 15 day drags. Best catches ran about 15 pounds per hour.

Two Varieties of Flounder Taken

Two species of commercially valuable flounders were caught in most of the drags. Summer flounder, averaging ¾ of a pound, and sand flounder, averaging about 1 pound, were caught at rates of 2 to 80 pounds per hour. In general, scrap fish catches at all stations were small with the exception of one drag at 31° 42.5' north latitude, 79° 37' west longitude, in 36 fathoms, that caught 1,365 pounds of spot. These fish averaged about 3 or 4 to the pound.

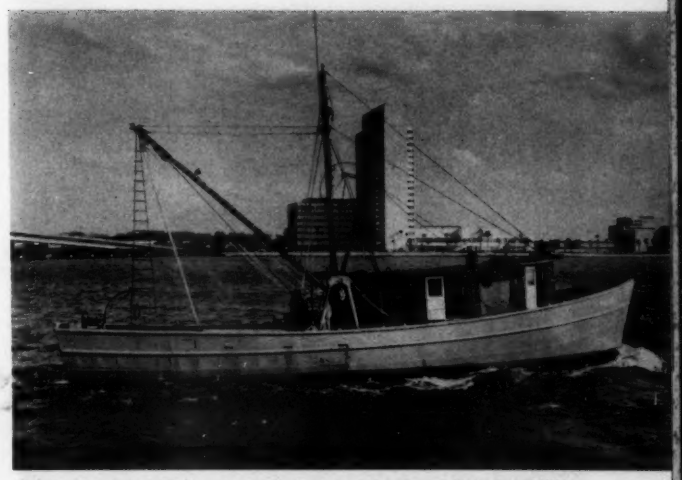
Bottom conditions as observed by echo tracings and bottom samples indicated extensive trawlable sandy bottom between 20-30 fathoms in the area between Jacksonville, Fla. and Savannah, Ga. Between 30-50 fathoms the area was found to be generally rocky, rough, and to drop off steeply.

"Bowers" Specially Designed for Research

The *George M. Bowers*, a new vessel with 73' length, 21' beam and 7' draft, was built by Steam Ways Corp. of Tampa, Fla., to design specifications drawn by Reidar F. Sand, chief of the Fish & Wildlife Service's Gear Research and Development Program at Coral Gables. The vessel joined the F&WS fleet during January, and upon completion of her shrimp exploration assignment, will place emphasis on research in fishery methods and equipment.

While substantially of shrimp trawler design common to the South Atlantic area, the *George M. Bowers* is modified for economical operation as a multi-purpose fishing vessel for use in trawling, trolling, seining, long-lining, gill-netting, live bait fishing, and for underwater television and sound gear research in the commercial fisheries. Equipped with laboratory facilities for electronic and biological research, the vessel features a unique and completely adequate electrical system designed by the Fish & Wildlife Service's Electronics and Electrical Specialist, Richard L. McNeely.

While the planning of the *George M. Bowers* was based largely on practical experience from other exploratory and fishing vessels, she has been designed with provision for adaptation to the future needs of an experimental and exploratory fishing vessel. The range of operation for the new craft will be from Cape Hatteras, N. C. to the Gulf of Mexico and offshore waters. For this reason the *George M. Bowers* is strongly built, amply powered for a 5000-mile cruising range, and equipped with the most modern navigational devices, including Loran.



74' steel trawler "Pelican", which is under charter to Fish & Wildlife Service for experimental deep-water shrimping.

The vessel bears the name of a distinguished former U. S. Commissioner of Fisheries, George M. Bowers of West Virginia, who held this office from 1898 to 1913. In 1902-1903, Mr. Bowers was president of the American Fisheries Society.

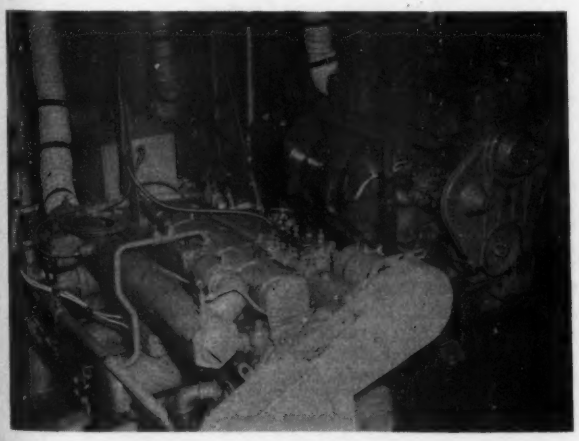
Winch Winds Five Hundred Fathoms Wire

The king-sized winch on the *George M. Bowers* carries 500 fathoms of cable and is designed for bringing up shrimp from 250 fathoms. Power for the winch is supplied by a 55 hp. Model 6-DAMR-273 Buda Diesel, driving through a torque converter.

Main propulsion engine is a Model 6-DC-1879 Buda Diesel, rated 192 hp. at 1200 rpm., with a Twin Disc 3:1 reduction gear. The engine is capable of pushing the 92-ton vessel at a steady 10 mph.

A Twin Disc power take-off is used to drive the Westinghouse air compressor which supplies air for the Westinghouse air controls. The main engine is equipped with a Ross heat exchanger.

Other engine room equipment includes a Model 4BDMRG Buda Diesel generating unit, with a 10 kw. Allis-Chalmers generator, and a 3 kw. Onan Diesel generating set. All three Buda Diesels were supplied by the Gulf Coast Engine Sales of Tampa, Fla.



Left: two Buda auxiliary Diesels in engine room of "George M. Bowers". Right: the vessel's 3 kw. Onan Diesel generating set.

Maryland's new 42' soft clam research vessel "John A. Ryder".

Research Boat "John A. Ryder" Doing Experimental Soft Clam Dredging

The *John A. Ryder*, recently acquired research vessel of the Maryland Department of Research and Education*, is fully equipped for experimental dredging of soft shell clams. Forty-two feet over-all and registered at eight tons, the boat was constructed by Bronza M. Parks at Wingate, Maryland, in 1946.

Noteworthy is the fact that the *John A. Ryder* and the entire complement of dredging and research equipment was purchased from the Clam Fund, which was earmarked by the 1955 Legislature for the purpose of clam research and supported solely through a bushel tax on Maryland's production of soft shell clams. The *John A. Ryder* was named for a pioneer shellfish biologist who, during the period 1881-1885, made what are believed to be the first published observations on the biology of the soft shell clam in the Chesapeake area.

Dredging equipment on the *John A. Ryder* was installed by Fletcher Hanks at Oxford in 1955. A Deming centrifugal pump of 6" intake, driven by a Plymouth motor, supplies hydraulic power. Living quarters for two are provided in the trunk cabin, and adequate stowage is available for diving gear, photoelectric instruments, and other equipment used in the clam research program.

* Excerpted from "Maryland Tidewater News", published by the Maryland Department of Research and Education.

Wood Veneer Circles Tested as Oyster Spat Collectors

Wood veneer circles for collecting oyster spat were first tried by the Shellfish Laboratory of the British Columbia Department of Fisheries in 1954, and satisfactory setting results were obtained in 1955.

Strips of veneer, 24 inches long and 3 inches wide, are folded into a circle, and the two ends stapled together with a desk stapler, using three staples. These circles are then sprinkled with water to make them damp, after which they are dipped in a thin mixture of cement and water. No sand or lime is used. The Laboratory recommends that the work be done in cool, damp weather to allow the cement to dry slowly.

Costs based on a 3,000 circle dipping operation amounted to 2¢ per circle, the surface area of which is 1 square foot. The circles are simply strung on galvanized wire, 30 to a string. Such a ground weighs only 5 pounds, as compared to the equivalent of 30 to 40 pounds of British Columbia shell cultch.

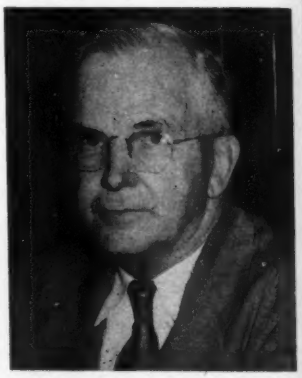
The wood veneer circles are heavy enough to sink, but no weighting or extensive floats are necessary. The major problem in using the circles seemed to be transporting them, since they are rather bulky.

How to Increase Fish Consumption Discussed by Advisory Committee

The American Fishery Advisory Committee, at its third meeting in Long Beach, Calif., on May 1 and 2, recommended market studies to determine areas of low fish consumption, as well as promotional campaigns, development of new products, and improvement in quality to aid in raising the present per capita consumption figure of about 10 pounds. Emphasis on exploration of new fishery resources and the development of more efficient gear to increase production also was stressed.

The Committee discussed the need for a well-rounded long-range program of biological research directed toward understanding the causes of fluctuations in fishery stocks in order to explain them, to predict their occurrence, and to use such understanding for the benefit of the fishery industries.

Established under the terms of the Saltonstall-Kennedy Act which was passed in 1954 to promote increased production and marketing of domestic fishery products, the American Fishery Advisory Committee meets periodically to advise the Secretary of the Interior on the various research and marketing activities which the Fish and Wildlife Service is conducting under the terms of the Act.



Assistant Secretary of Interior Wesley A. D'Ewart, who is chairman of the American Fishery Advisory Committee.

Favor Expanded Program

The Committee commented favorably on the program so far undertaken, but urged expansion of the activities through continuance of the Act and the provision of a substantial increase in the funds which are available annually. At present the limit of expenditures in any one year is $3 million.

Assistant Secretary of the Interior Wesley A. D'Ewart, who is chairman of the Advisory Committee, served as presiding officer during the two-day California meeting. In his opening remarks, Secretary D'Ewart reaffirmed the Department's determination to give all possible aid to the industry.

A report on accomplishments since the last meeting in September 1955 was presented by Fish and Wildlife Service Director John L. Farley, A. W. Anderson, Chief, Branch of Commercial Fisheries, and Dr. L. A. Walford, Chief, Branch of Fishery Biology.

Visit Tuna Cannery

While in Long Beach the members of the Committee had an opportunity to visit the world's largest tuna cannery at Terminal Island where they observed tuna canning, from the unloading of the vessels to the finished product.

The 15 members of the Committee who attended the meeting were: Moses B. Pike, Eastport, Me.; James S. Carlson, Boston, Mass.; J. Richards Nelson, Madison, Conn.; David Hart, Cape May, N. J.; Harold R. Bassett, Salisbury, Md.; Harry F. Sahlman, Fernandina Beach, Fla.; Leon S. Kenney, St. Petersburg, Fla.; Alphonse J. Wegmann, Pass Christian Isles, Miss.; Lawrence W. Strasburger, New Orleans, La.; Arthur Sivertson, Duluth, Minn.; Donald P. Loker, Terminal Island, Calif.; Arthur H. Mendonca, San Francisco, Calif.; Thomas F. Sandoz, Astoria, Ore.; Mark L. Edmunds, Garibaldi, Ore.; Lawrence C. Calvert, Seattle, Wash.

The next meeting of the Committee will be held in New Orleans, La., in January 1957.

Maine Fishermen Not Taking Advantage of Gas Tax Refund

An estimated $100,000 in gasoline tax refunds belonging to Maine fishermen and other boat operators was not returned to them last year simply because they failed to ask for it.

According to statistics from the Bureau of Taxation, last year there was a decline of 38 percent in the average of individual requests for refunds. In 1948 there were some 5,345 lobster fishermen. Rebates for the period were based on 3,108,600 gallons of gasoline used by boat operators. In 1955 there was a total of 6,050 lobster fishermen. But refunds were paid only on 2,643,000 gallons.

The amount of gasoline tax refund allowed per gallon has climbed steadily since 1948, and last year amounted to six cents a gallon. Rebates are available to all boat operators, including those with outboard motors, who use marine gasoline. All that is needed is a refund application and the gasoline sales slips. The only restriction is that the slips be returned within nine months of their date. The applications and invoices should be mailed to: Bureau of Taxation, Gasoline Tax Section, Augusta, Me.

"Metacomet" Chartered for Sardine Explorations

The chartering of the private fishing vessel *Metacomet* for Maine sardine explorations was announced on May 16 by John L. Farley of the Fish & Wildlife Service. The *Metacomet* replaces the *Theodore N. Gill*, which has been removed from service because she could not economically be retained in the exploratory work.

The *Metacomet* is a Gloucester, Mass. vessel, but will be based at Boothbay Harbor while on charter with the Fish & Wildlife Service. Exploratory work will be conducted along the Maine Coast, just outside the outer ring of islands and beyond what is considered the usual fishing waters for the sardine. The project is being carried out with funds made available under the terms of the Saltonstall-Kennedy Act.

Green Crabs Are Main Clam Enemy

Green crabs were labeled the number one enemy of the soft-shell clam industry by members of the Maine Sea & Shore Fisheries Dept. and the Fish & Wildlife Service, speaking at the Spring meeting of representatives of the Maine shellfish industry in Augusta last month.

The most productive line of attack so far has been the use of special fences to protect potentially-productive flats from the green crabs. These fences have been used experimentally in a number of areas along the coast.

Other lines being pursued include a study of green crab diseases, research into the general biology of the predator, investigation of the effect of climatic changes on the green crab population, and studies of parasites and predators which may prey on the green crab.

Reports on the present status of shellfish research work in Canada, and on the operation of the quahog dredge *Venus M.*, given by Dana E. Wallace, Sea & Shore Fisheries shellfish specialist, concluded the formal portion of the program.

Lobster Boat Wrecked on Beach

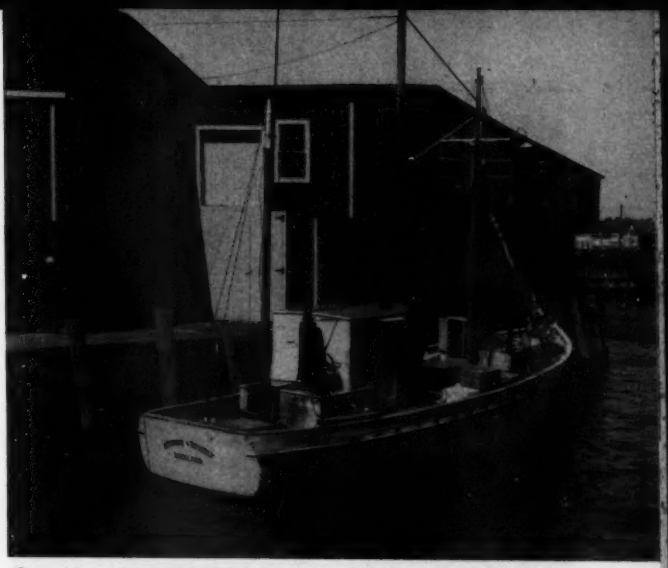
A 42-ft. Nova Scotia-built lobster boat owned by James Willis of Owls Head parted her moorings and was swept ashore by a southeast storm on May 27 at Crockett's Beach, Ash Point. The craft survived the beaching, but broke up during the night as efforts were made to haul her ashore at high water.

Islesboro Clam Program Paying Off

At Islesboro, the program of research on the propagation and protection of soft shell clams has paid off. In 1952 a special town meeting closed specified flats. Several months later Robert L. Dow, Director of Marine Research, Dana E. Wallace and Frank Hallowell, with the cooperation of local clam diggers and buyers, made surveys and recommendations regarding the opening and closing of areas for commercial digging.

A five-citizen Islesboro Shellfish Committee was elected by the residents at the 1954 annual town meeting to continue intensive work with the Sea & Shore Fisheries staff, to benefit not only Islesboro but other coastal areas. Recently elected members of the Shellfish Committee include Augustus Coombs, Hugh Dodge, Robert Pendleton, Sydney A. Pendleton and Ralph Porter.

Islesboro clam diggers have taken advantage of the advice provided, and have closed and opened areas as recommended following surveys of size and number of various clam sets. They are being more careful in digging, as studies show that 50 to 60 percent of small clams in a given location are killed after the area has been dug, due to the clams being buried too far below the surface.



Capt. Maxwell Young's 50 ft. "Catherine & Beverly" of Rockland, Me. Capt. Young goes lobstering in the Winter, having been fishing on Cashe Ledge recently, and seines for mackerel in the Summer. The boat is powered by a 110 hp. General Motors Diesel with 2:1 reduction gear, and uses RPM lubricating oil and Linen Thread Co. Gold Medal nets.

Set Dates for Lobstermen's Convention

The officers and executive council of the Maine Lobstermen's Association met in Rockland last month to make plans for the annual convention to be held in Rockland on June 7 and 8. It was voted to invite all licensed lobstermen and ladies to the convention.

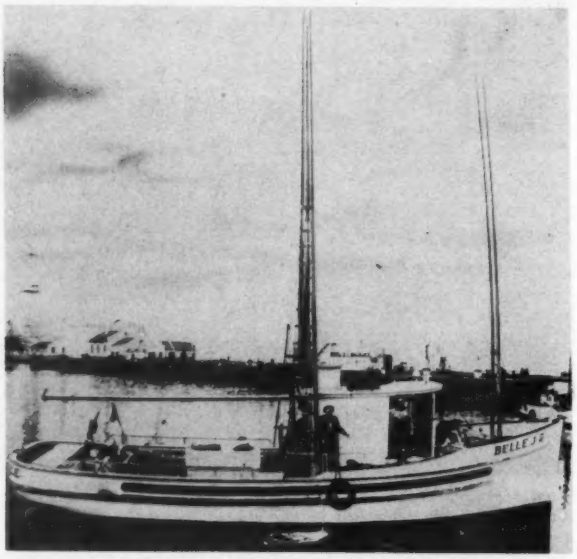
The officers of the Association were instructed to extend an invitation to the Maine Lobster Dealers to meet sometime before the annual convention to discuss the price situation during the summer months.

Later in the month a program to promote the sale of lobsters through a half-cent per pound tax was discussed by the Association. The plan drew the backing of Stanley R. Tupper, Commissioner of Sea and Shore Fisheries, who said a wide-awake advertising campaign during peak production months, coupled with continuous marketing research, would bring larger profits to lobstermen and dealers alike.

Sardine Industry Commends Sen. Payne

Commendation of Sen. Frederick G. Payne of Maine for his efforts and accomplishments on behalf of the nation's commercial fisheries, was voted unanimously last month by the Maine Sardine Industry.

Payne has been seeking to increase the sale of sardines to the armed forces. Also, he recently introduced a bill to establish a commercial fisheries division in the Interior Department, headed by an assistant secretary.



Capt. and Mrs. Gus Johannson of Seattle and their dog "Pancho" constitute the crew of the 45½' northern troller "Belle J II". They fish for salmon and albacore from Alaska to Mexico, and their boat has a capacity for 16 tons of fish. She is equipped with Model 45 Bendix automatic pilot, and Capt. Johannson reports that they often go 60 to 70 hours without touching the wheel. They frequently change course, but this is done by using the course changer button.

Washington Halibut Vessels to Have Week Between Trips

Although the International Pacific Halibut Commission in its regulations for the 1956 North Pacific halibut season set May 12 as the opening date, the halibut fleet did not sail in order to begin fishing by that date. In an effort to level off some of the heavy landings that occur on some days, fishermen out of Puget Sound, British Columbia and Alaska ports voted to delay actual fishing until May 20.

The fishermen's unions also voted that (1) halibut vessels carrrying three or more men would tie up for seven days between trips and (2) small vessels carrying either one or two men will be permitted to fish for 14 days to begin the season and then tie up and fish for alternating periods of seven days.

New Grading System for Salmon

A new system of grading troll salmon is being used on the Seattle waterfront, and it is hoped the method will end the tension between fishermen and buyers over the 10 or 12 pound break.

The new method allows for all fish under 8 pounds to be classified as small, 8 to 12 medium and 12 pounds and over as large.

However, some fishermen have been selling directly to Eastern markets through the Halibut Fishermen's Cooperative, and may continue direct sales in spite of the agreement reached in Seattle.

Halibut Fishermen Turn Down Strike Proposal

For the second time, Seattle halibut fishermen, members of the Deep Sea Fishermen's Union, turned down a strike proposal to enforce demands on minimum prices. And the action in Seattle caused Canadian fishermen to ponder a revote on the strike they had overwhelmingly voted.

Predict Good Salmon Catches in 1958

Officials of the International Pacific Salmon Fisheries Commission predict that 1958 will be a golden one for fishermen. They report that the greatest salmon run in memory is squeezing out of the broad reaches of Shuswap Lake, 200 miles northeast of Vancouver, into the Thompson River, bound for the Fraser and the sea.

Dr. Smoker Joins Alaska Fisheries Department

Dr. William A. Smoker has resigned from the Washington Department of Fisheries and joined the staff of the Alaska Department of Fisheries. Dr. Smoker directed fresh-water research on salmon in the nine years he was with the Washington Department.

In Alaska, Dr. Smoker will conduct environmental studies on the fresh-water phase of young red and coho salmon with the goal of increasing these species.

Pink Salmon Study Proposed

Recommendations of a 16-member advisory committee that pink salmon be studied by the United States and Canada to determine the desirability of International control of runs shared by the two nations, have been forwarded to the U. S. Department of State. The recommendations were made to Gov. Arthur B. Langlie of Washington, who had formed the committee at the bidding of Secretary of State Dulles, following the request by Canada for such a study to lead to a treaty.

The committee urged that the treaty area for pinks in the ocean should extend from Cape Disappointment at the mouth of the Columbia to Cape Cook on Vancouver Island, and the inland area should not be less than the waters now embraced under the sockeye treaty in the Strait of Juan de Fuca, San Juan Islands and the Strait of Georgia.

Salmon Fisherman Honored

Pres. Eisenhower and Gov. Langlie of the State of Washington joined with the Everett Elks Lodge last month to pay tribute to Paul Martinis, for more than 40 years one of the top salmon fishermen in the Pacific Northwest. A telegram from Pres. Eisenhower and a letter from Gov. Langlie were read at the annual Fishermen's Night observance of the Elks.

Martinis came to this country from the Dalmatians in 1913, lived for a while in Astoria, Ore. and Anacortes, then came to Everett where he soon became known as the kingfish of the purse-seine salmon fleet. He has been making annual trips to Alaska almost every year, and plans another trip this year. Martinis was one of the prime figures in the organizing of the Fishermen's Packing Corp., formed in the early 1930's, and is still a director.

Four of his sons were present at the celebration, and many notables from the fishing world also were in attendance.

Agree on Alaska Salmon Prices

The Alaska Fishermen's Union has accepted a 5½% increase in prices for salmon. Copper River canners, who are located in the earliest Alaska fishing district, will pay $1.35 per fish for reds, 8% higher than last year; 45¢ for pinks, a 2½¢ increase.

Reopening of Prince William Sound, after two years of enforced idleness, and less stringent restrictions in Southeastern Alaska, raise industry hopes for getting 1,750,000 cases of pinks—enough to offset there being no run on Puget Sound this year. There is similar optimism for reds, with strong comebacks by several important regions expected. Copper River, now operating, is likely to exceed short 1955 run of 50,000 cases.

Seattle Otter Trawl Landings for May

Totaling 1,822,000 lbs. which was landed in 50 trips, fish production by the Seattle otter trawlers during May showed an increase of 350,000 lbs. over the previous month, and a gain of 450,000 lbs. over May, 1955. Nearly one-third of the catch was made up of true cod, landings of this variety having amounted to 673,700 lbs. In second place was Dover sole, with 276,800 lbs.

California Has Large Fleet Fishing for Salmon

The successful sport fishing season for salmon this year has resulted in an increase in commercial salmon fishing, as many part-timers turned to making it a full-time job. California Fish & Game Commission estimated an increase of about 25% in number of commercial licenses sold this year. Men engaged in salmon research felt it was still too early to tell whether the salmon would hold up under the fleet of several hundred boats fishing the area from Monterey to Fort Bragg.

Fishermen voiced their protests against black marketing of salmon by sports fishermen and heavy imports of tuna from Japan at a mass meeting held in Moss Landing just before the opening of the salmon season. With several hundred commercial fishermen in port at the time, initial steps also were taken toward setting up their own organization to seek action in Sacramento and Washington.

Problems of albacore fishermen as a result of imports were explained by Bruce North of the *Judy II*. Leonard Goulart of Monterey pointed out that salmon caught by sports fishermen before the season opened and bootlegged in the markets was undercutting the price of salmon, while depleting the salmon fishery upon which the commercial fisherman depends for a living.

Opening price for salmon in the Monterey Bay area was 40¢ a pound for fish over 12 pounds and 34 for those under. Day boats were making fair catches of salmon in the bay. The big trollers gathered prior to the opening of the season and after working out of Moss Landing the first week, headed north toward Point Arena and Fort Bragg.

Among the boats which completed preparations for fishing in Moss Landing were the *Norfjord*, Capt. Leif Reinholdtsen; *Norge*, Capt. Don Jacobsen and his son, John; *Advance*, Capt. Cliff Avery; *Sea Bee*, Capt. Walt Jensen; *Ellie IV*, Capt. Roy Myking, and his brother Lloyd on the *Ragnar M.; Teddy J.*, Capt. Ted Jacobsen; *Tuscan*, Capt. Gus Angellsen and his son Odd; *Christe II*, Capt. Roy Johnson; *Ronny*, Capt. Ole Hansen; and the *Nancy Jean*, Capt. Bill Skipwith.

From Morro Bay the *Kay*, with Dudley Rowe as skipper; Kenneth Dahl on the *Friendship*; Wilbur Northrup on the *Destiny*; Leo Jubelt on the *Kay Bee*; and Bill Casper on the *Doris N.*; made Moss Landing their headquarters.

Troller Grounds on Rocks

The 42-ft. troller *Patricia* was a total loss when she grounded last month on the rocks off Point Reyes. Owner Francis Furber and his wife Eva were aboard the boat. Furber swam to shore, climbed up a 700 ft. cliff to seek help from the Coast Guard. A volunteer apprentice seaman swam to the vessel and brought Mrs. Furber safely to shore on a line.

Predicts Poor Sardine Season

John Radovich of the State Fish & Game Dept. recently stated that research on the spawning of sardines in the past year indicates the next sardine season will be a poor one. Radovich pointed out that spawning has been poor since 1952, and unless favorable conditions allow for a good spawn survival, the outlook is not good.

Sardines moving in from Mexico could change the picture, but unless the movement brought younger fish with it, the sardine population would decline further, even though temporary catch figures would show an increase.

April Landings at Canneries

During the month of April a total of 19,800 tons of tuna were landed at California canneries, in addition to 153 tons of Pacific mackerel, 1,500 tons of jack mackerel and 4,400 tons of anchovy.

Capt. Einar Lovvold of Eureka, Calif., and his 40' troller "May", which is powered by an 85 hp. General Motors Diesel, and has automatic pilot, depth sounder, direction finder and radiotelephone.

Total tuna canned by the California processors during the first four months of 1956 was 3,222,424 standard cases, which was an increase of 49%. The figures show 103% larger production of solid pack and 80% more lightmeat chunks in the four-month period.

In its 1955 session, the California State Legislature placed a cannery limit of 35,000 tons on anchovy for the period April 1, 1956 through March 31, 1957, and a cannery limit of 3,000 tons of yellowtail for the period of July 1, 1955 through June 30, 1956.

Five Lost from Purse Seiner

Five San Pedro area fishermen lost their lives in one of the worst fishing tragedies in several years, when their purse seiner *Western Explorer* crashed on rocks off Socorro Island on May 14. The remainder of the crew of 11 were rescued.

The 87' vessel had taken refuge in the lee of the island during a heavy tropical storm, but high waves and wind drove her on the rocks. The *Western Explorer* was owned and operated by Frank Manaka of Wilmington, and was carrying a full tuna load of 110 tons when she grounded.

George Fukuzaki, skipper of the *Stella Maris*, also from San Pedro, piloted a small skiff through mountainous waves kicked up by the 80-mile winds to pick up survivors clinging to boat wreckage, reefs and rocks where they had been for 10 hours.

San Pedro Anchovy and Mackerel Yields Double

Anchovy and mackerel catches at San Pedro during the first four months of the year were almost double the same period last year. The two species totaled 24,300 tons through April 30, compared to 13,180 tons for the period in 1955. This year's total includes 12,370 tons of jack mackerel and 9,400 tons of Pacific mackerel.

Boats Get New Owners

Sal Cardinale of Monterey has purchased the *Gasper Boy* from Joe Spadaro. Bob Nichols of Los Gatos is the new owner of Les Ballinger's *Leona M.*, and Jim Frazier of Santa Cruz is fishing Dick Maier's *Escapade*, while Dick Maier skippers the *Nora R.*

Andrew Vilicich

Andrew Vilicich of San Pedro, managing owner of seven fishing vessels, died late in April. He was one of the founders of the Fishermen's Cooperative Assoc. of San Pedro.

Vilicich owned the purse seiners *California, Marsha Ann, Sunbeam, Corsair* and the mother ship *Alaska Reefer*. Two other ships owned by Vilicich, the *North Star* and *Pacific Queen*, operate out of Seattle.

Oregon Commission Making Razor Clam Growth Studies

Razor clams—nearly 700 individuals—have been identified with a number on their shells and replaced in the sands of the Clatsop beaches somewhere between Seaside and Astoria in a "growth study" by Oregon Fish Commission scientists. One group of clams will be recovered in six months, and the remaining mollusks in a year.

"We hope to determine the difference in growth by beach level," says biologist Robert J. Ayers of the Astoria research laboratory of the Oregon Fish Commission, who is in charge of the investigation. "Do clams offshore that take food from the water grow at a different rate than clams living high on the beach? We would like to know."

Observations on other species of clams reveal that some clams grow faster offshore than those on the beach, and in some the reverse is true. The present clam digging regulations, under order promulgated by the Fish Commission, are based on the assumption that the growth rate of razor clams is the same at all beach levels.

Drag Boats Catching Mink Feed

Newport drag boats are fishing for mink feed, various species of small bottom fish. The Columbia River Packers in Newport has opened its facilities to receive mink feed this Summer. The boats *Pacific Queen*, Capt. Cliff Hall; *Sea Breeze*, Capt. Wilburn Hall; and the *Alton*, Capt. Ray Hall; will supply that plant.

Biologists Sampling Commercial Catches

Opening of the commercial fishing season on the Columbia River means a busy time for biologists of the Oregon Fish Commission, as well as for the fishermen, because scientists are stationed from Astoria to Oneonta to sample the catch. The fish experts go out by boats and visit the commercial vessels, in addition to being at the fish receiving stations on shore.

The biologists are looking for tagged and marked fish. Scale samples are taken on marked fish to determine their age. On sturgeon, sex determinations and maturities are made. Average weights of fish are taken.

Where Boat License Number Should be Displayed

Because of misunderstandings in regard to marking commercial fishing boats and vessels in the waters of the Pacific Ocean, the Oregon Fish Commission wishes to clarify the regulation. The law states that the commercial license number shall be displayed and easily discernible at all times in three conspicuous places: 1. on the right or starboard side; 2. on the top or roof of the pilothouse or cabin; and 3. on the left or port side of the boat or vessel.

The number, preceded by the letter "O", shall consist of black figures not less than six inches in length on light ground, or white figures not less than six inches in length on dark ground.

First Catches of Ocean Salmon

The first catches of ocean salmon were brought in to Newport early last month amidst a dispute in price that has been waged up and down the coast. The price paid fishermen for salmon at first was 38 cents for those weighing over 12 pounds, and 30 for salmon under 12, but after considerable protest of the 12-pound split, buyers agreed to make three prices. They are paying 29 for those under 8 pounds, 32 for those between 8 and 12, and over 12 pounds, 40 cents.

Catches were scattered, with no word of any great concentration up and down the coast.

Yaquina Jetty Work Nearly Finished

The Yaquina harbor jetty work is again in full swing, and the new wall is about three-quarters completed. The work, under contract of the Pacific Bridge Co., began about a year ago after the old north jetty had been left in a state of disrepair for a number of years. This harbor improvement will be of great help to fishing boats.

Good Chinook Salmon Run in Willamette River

Counts made at the fishway at Willamette Falls near Oregon City reveal that the 1956 progeny run of spring chinook salmon already has exceeded the 1951 parent run in the Willamette River.

"This is the fifth consecutive year that the offspring run has exceeded the parent run," says biologist Earl F. Pulford, in charge of the Willamette River investigations for the Oregon Fish Commission. "As of May 19, more than 40,000 spring chinook salmon had passed through the fishways; the total parent run escapement over the Willamette Falls in 1951 was 34,000 fish."

The salmon were still moving in numbers the latter part of May; in past years they moved well into June. Along with the good run of spring chinook salmon, sport fishermen have reported one of their best years of fishing.

Red Abalone Found off Oregon Coast

News that red abalone of the California coast have been found in Oregon waters has been announced by the Oregon Fish Commission. All abalone taken were large, 10 to 11 inches in length, and were found at Whales Head Island, 2½ miles north of Cape Ferrelo.

It is not known yet if the fishery would be worth developing, since only small numbers were found, but it is a resource which would be worthwhile exploring.

To Construct New Fishway

Sealed bids for the construction of a gravity-type fishway at the site of Middle Falls on Eagle Creek in Clackamas County were received by the Oregon Fish Commission until June 12. The new fishway, consisting of 20 pools, will replace an old fishway constructed about 1947.

Pick up Japanese Drift Bottles

Several sealed bottles from the Orient, washed across on the ocean's waves and recently picked up on the Netarts' sandspit, are of interest to the Oregon Fish Commission. Cards inside ask for information in an investigation of the Japanese Pacific salmon fishery. It is requested that anyone finding such a bottle contact the Oregon Fish Commission before returning the papers found inside.

The 40' x 11' x 5'8" troller "Jana-Jo", owned by A. B. Chittester of Disston, Oregon, and powered with a Chrysler Royal engine.

Capt. David Beveridge of Beaufort, N. C., and his new 50' Hatteras Trawler "Beveridge", which is powered with a 200 hp., NHM-600 Cummins Diesel (shown in center). The new shrimper replaces Capt. Beveridge's "Jerry", and was built by Morehead City (N. C.) Shipbuilding Corp. She will operate in North Carolina waters until Fall, when Capt. Beveridge will take her to the Gulf of Mexico. Equipment includes 40 x 34 four-blade Columbian propeller, 750-watt Onan generating set, Surrette batteries, Jabsco bilge pump and Stroudsburg hoist.

Maryland Croakers Arriving In Larger Numbers

Lower Chesapeake Bay fishermen are reporting increasingly good catches of many varieties. Croakers, better known as hardheads, are now reported to have begun to arrive in larger numbers.

Black drumfish began to arrive in Tangier Sound off Crisfield early in May in larger quantities than for the past few years. Warm, brisk, southerly winds are said to have caused the fish to school up and move up the bay and into the sound. Local fishermen on one day were reported to have caught more than 50 of the big fish in their traps, averaging 20 to 50 pounds each.

Want Marine Laboratory Located in Crisfield

Senator Harry Byrd of Virginia and Senator John M. Butler of Maryland have introduced as co-sponsors S.3827, a bill which would authorize the expenditure of $250,000 for the construction of a marine laboratory to be used by the Fish & Wildlife Service. Groups in Crisfield have sent letters and telegrams to the Senators and Congressmen urging that the laboratory be located in Crisfield, since they consider it to be the center of the seafood industry for the Bay area.

Moving Seed Oysters

Chesapeake baymen have been moving young seed oysters this Spring from the seeding areas to the growing grounds in the other parts of the bay. From the Mill Hill seed bed area alone, it is reported, over 100,000 bushels of seed oysters have been moved and transplanted this year.

Crabbers Hampered by Cool Weather

Crisfield crabbers have not been able to make any large catches of either hard or soft shell crabs, and trot liners and scrapers are reporting their catches very small. Crab potters say their catches are not what they should be at this time of the season. However, all give the same reason —the weather has been too blustery and cool.

Seafood Processing Laboratory Dedicated

Governor Theodore R. McKeldin was the guest speaker last month at the dedication ceremonies of the University of Maryland's Seafood Processing Laboratory at Crisfield. The laboratory currently is developing better methods of processing crabs and oysters.

North Carolina May Ban Night Shrimping for Two Months

More than 2,000 shrimp boats began operating in North Carolina waters at midnight on May 27. The Commercial Fisheries Committee of the State Board of Conservation opened the season after holding a public hearing on a proposal to ban night shrimping July 10 to Sept. 1.

Some 200 commercial fishermen attended the meeting, although the committee took no action on the proposal. Committee Chairman Cecil Morris said the committee will make recommendations on the proposal at a meeting July 2-3.

Fisheries Association President Garland Fulcher said the group also proposed that year-round shrimping be allowed in rivers and sounds.

Purse Boats Equipped with Hydraulic Blocks

Capt. Wiley Lewis of Beaufort, in command of the *Fish Hawk*, will be using a new device for pulling in purse seines this Summer off the Jersey coast. The new equipment consists of hydraulic blocks for purse boats, and they have been used successfully on the West Coast by tuna fishermen.

Capt. Lewis returned recently from Fernandina, Fla., where he saw the new gear in use. A hydraulic block is put in each of the two purse boats. It is reported that on one set 824,000 menhaden were taken with only one or two men in each purse boat.

In addition to the *Fish Hawk*, the J. Howard Smith fleet will have three other boats equipped with the new machinery. They will be the boats fished by Capt. Bonner Willis, Jr., Capt. Berkley Simpson, both of Beaufort, and Capt. Fred Haney of New Jersey.

Trying to Refloat "Cherokee"

The 110-ft. former World War I subchaser *Cherokee* went aground a few miles north of Corolla early in April, and efforts to refloat the trawler still were being carried on late last month. At the time the vessel went aground, one man lost his life due to exposure, and during salvage operations another man lost his life.

Capt. B. F. Forrest of Hampton, owner of the *Cherokee*, has stated that in his opinion if Oregon Inlet had been properly channeled all the vessels caught in the storm of April 2 would have been able to gain safety.

Gloucester Industry Boosted By New Gorton Plant

Gorton's million dollar Seafood Center was officially opened on May 25 by Governor Christian Herter, who called it an important development in Gloucester's fishing economy, and said it represented a dynamic approach toward creating enlarged markets for fish.

The new plant is a three story brick and concrete building, 110 x 65 ft., with an attached office structure, 55 x 40 ft., on the Gloucester waterfront. It is equipped with the most modern, sanitary seafood processing machinery, and has red brick floors and yellow ceramic tile walls.

The Company is moving part of its research laboratory into the new plant, in order to have on-the-spot scientific control of production and quality.

In keeping with its plant and product modernization program, the Company has changed its name to "Gorton's of Gloucester". It was known for much of its previous 125 years as Gorton Pew Fisheries Co. Ltd., said to be the oldest corporate entity in the fisheries industry.

F. M. Bundy, president of Gorton's, stated that the Company has inaugurated continuous Government Inspection by the U. S. Department of Agriculture, making its products the first seafood to be packed under such official inspection. These products include Gorton's Heat and Serve Seafoods, Fish Sticks, Perchies, French Fried Scallops and Bite Size Fish Cakes.

The new Seafood Center is in a combination structure which also houses a public warehouse, operated by the Quincy Market Cold Storage & Warehouse Co., who built the entire project and leased the seafood packing section to Gorton's.

"Rita B." Scalloping out of Gloucester

The *Rita B.*, owned by Ernest J. Flood of New Bedford, now is scalloping out of Gloucester, having landed a trip of 9,000 lbs. on May 7. She was recently repowered with a 300 hp., 1200 rpm., Model 35 Atlas Diesel, with Snow-Nabstedt 3:1 reduction gear. The same model engine has been installed in the scalloper *Abram H.*, also owned by Flood.

Fish Catch for Four Months Shows Gain

Gloucester fish landings for the four-month period ending with April showed an increase of 1,652,000 lbs. over the same months of 1955. Whiting was up by 3,108,000 lbs., while mixed fish production was about the same as last year. The ocean perch yield was down by 1,293,000 lbs., and trash fish landings were 224,000 lbs. less.

"Puritan" Changing Over to Pogy Seining

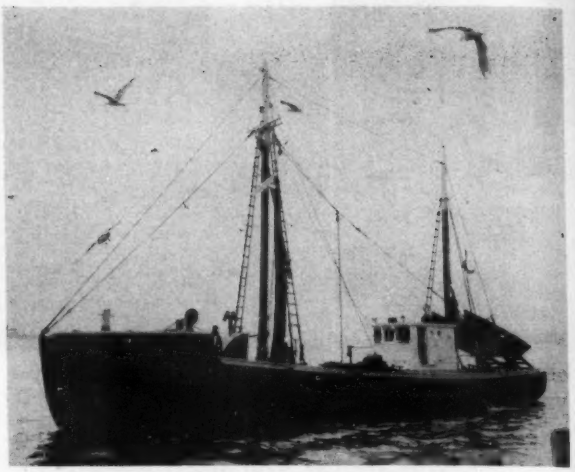
The dragger *Puritan* was at the Beacon Marine Basin last month being rigged for pogy seining this Summer. The winch has been taken out, and the open hatch in the center of the deck has been enlarged to take the power scoop for unloading.

Big Days at Fish Pier

Gloucester had four days last month when fishing vessels arrived with more than one million pounds of fresh fish. On the 2nd, 9 vessels brought in 1,044,000 lbs.; on the 21st, 17 landed 1,264,000 lbs.; on the 24th, 16 brought in 1,491,000 lbs.; and on the 28th, a fleet of 25 landed 1,916,500 lbs.

Capt. Manuel Rocha

Capt. Manuel Rocha, 63, one of Gloucester's well known skippers, died suddenly on May 15 at his home. Capt. Rocha was born in Portugal, and came to Gloucester at the age of 17, at which time he began fishing out of the port. For the past eight years he had owned and skippered the dragger *Lady of Good Voyage*.



The 81' dragger "Sebastiana C.", owned by Mrs. Sebastiana Chianciola of Gloucester, Mass., and skippered by Capt. Mike Lovasco. Her equipment includes DMM16, 6 cylinder, 8 x 10 Enterprise Diesel, rated 260 hp. at 800 rpm.; 2:1 Snow-Nabstedt reduction gear, Twin Disc front power take-off, and 55 x 39 Columbian propeller.

Connecticut Oystermen Oppose Fill Dredging Project

James Mayhew, president of the Natural Growth Oyster and Fishermen's Assoc., last month charged that the State Shellfish Commission completely disregarded the rights of fishermen and conservation groups in approving an application to dredge 1,500,000 yards of marshland fill from Sherwood Island. The oystermen claim that if the dredging is done, they stand to lose thousands of dollars worth of young oysters.

Gov. Ribicoff said that he could not sanction a proposal by a group of conservationists to abandon plans for the dredging, and that he was basing his opinion on what is good for the majority of the people in Fairfield County.

Hard Clamming Permits Sold

Three hundred permits for hard-shell clamming have been sold at police headquarters in Westport for digging shellfish off Saugatuck shores from June 1 to October 1. The limit per day on a catch is one peck. No long clams can be dug, however, because the town has prohibited the taking of these for a year as a conservation measure.

Lobster Season Late

Stonington lobstermen are waiting the start of the good lobster fishing season. They are complaining that the lobsters are late in showing this year, and point out that only a few, mostly of the deep-sea variety, had been landed up to the first of this month.

The cold weather which has kept waters in the Connecticut area well under the seasonal temperature is blamed for the lack of lobsters.

Fleet Blessing Plans Nearly Complete

Stonington fishermen are making final arrangements for their first annual Blessing of the Fleet ceremony, scheduled on July 1. Many notables have been extended invitations to attend, and Bishop Bernard J. Flanagan of the Norwich Catholic Diocese already has accepted.

The celebration will be conducted on one day only this year, but the fishermen are planning to make it a two-day affair in future years. On the committee are Capt. Jim Henry of the *America;* Capt. Bill Roderick of the *Rita;* Capt. Denny Cidale of the *Carol and Dennis* and Capt. Gino Rendeiro of the *Averio.*

Texas Shrimp Production Shows Improvement

Landings of shrimp at Texas ports for the 30-day period ending May 25 showed an increase, and with generally favorable weather conditions, producers are more optimistic about future fish and shellfish production. The principal Texas ports reported a total of 1,441,000 lbs. of heads-off shrimp for this period, an increase of 225,000 lbs. over the landings of the preceding month, with brown grooved shrimp making up 76 percent of the catch.

For the first time this season, the bays showed fair production, but the shrimp were small. Good runs of white shrimp were caught along the coast in the Gulf north of Port Aransas during daylight hours, with brown grooved shrimp showing up at night. The Brownsville-Port Isabel area ranked first in production, with Aransas Pass second.

Fish production for the period was given as 224,600 pounds. Fish producers are greatly encouraged now that better weather has appeared.

Hurricane Warning System Improved

The beginning of the hurricane season this month finds the Gulf coast in a position to receive adequate warning of storms originating in the Caribbean and in the Gulf.

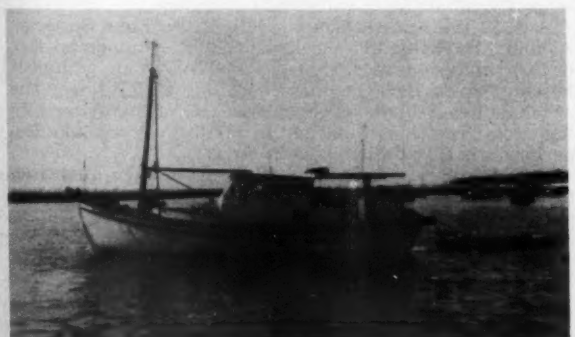
Two merchant vessels operating between Tampa, Fla. and Tampico, Mexico, are equipped with standard weather service equipment and report important weather conditions to key stations several times daily. Another vessel, operated by the Texas A. & M. College, started surface weather operations March 21, and these are to be supplemented by upper-air observations in the near future.

Other surface weather observations, including temperature of air and water, barometric readings, wind directions and velocities, humidity and unusual conditions pertaining to weather, are being furnished by commercial and fishing vessels.

Radar equipment has been installed at Corpus Christi and Port Arthur, Texas, and at Burrwood, La., and Tampa, Fla. Sixteen stations between Brownsville, Tex. and Miami, Fla. form a teletype weather circuit to report storm conditions affecting shipping.

Stresses Value of Building Fish Passes

Speaking at a meeting of the Laguna Madre Fisherman's Assoc. in Corpus Christi last month, Henry LeBlanc of Port Arthur, a member of the Texas Game & Fish Commission, said that a pass through Padre Island joining Laguna Madre with the Gulf is a must and that surveys with well thought-out plans would be made before the money for construction was available. Mr. LeBlanc contrasted places where there are openings through the barriers and where the openings are missing, and showed that fish are to be found where there are passes and are absent where there are no passes.



Capt. John L. Eldridge's 42' "Lina Bell" of Gulfport, Miss. She goes shrimping, oystering and fishing, and has 165 hp. General Motors Diesel.

The 43' shrimper "Victory Leader", owned by Lee Sanders of Palacios, Texas, who built her. She is powered with a 165 hp. General Motors Diesel.

Included in a long-range program for the Gulf coast is the re-opening of the pass at Cedar Bayou, north of Rockport, building of oyster reefs at favorable locations along the middle and upper coast, and the establishment of a salt-water fish hatchery with improved research facilities.

Long Island Weakfish Run Gets Under Way

The annual Spring run of weakfish in Peconic Bay, which according to fisherman's tradition coincides with the blooming of the lilacs, arrived on schedule, judging by catches of the commercial fishermen late last month.

Capt. Milton Jester of the fishing boat *Jean* brought in 13 boxes of weaks, and the next night eight. The majority of the fish were good size, some of them averaging over four pounds.

The honor of catching the first weakfish of the season in the Greenport area goes to Muir Brothers of East Marion, who, while dredging on their land at the head of Sterling Basin, Greenport, brought up a live roe weakfish weighing over 2 lbs. in the bucket of their dredge.

Oyster Shells to be Planted

Work on the project to place seed oysters in Islip Town waters of Great South Bay, which was started on May 1, was called to a temporary halt by the Islip Town Board when the Bluepoints Company offered to furnish free as many bushels of oyster shells as the town required in order to lay a bed for the seed oysters.

The Bluepoints Company will load the shells on boats belonging to local baymen. The baymen in turn will shovel the shells into the sea, leaving a bed upon which the seed oysters may take hold.

Good Flounder Catches

A few sea bass have been reported taken in the bay, as well as good catches of flounders, and the White Cap Fish Co. of Islip reports that there are a few mackerel around. However, most of their catches consist of sea bass, porgies, fluke and flounders.

Capt. Kenneth Payne

Capt. Kenneth H. Payne, 75, of Shelter Island, died on May 4. Capt. Payne had been active in the menhaden industry of the Atlantic Coast for over 50 years. He started fishing with his uncle, Capt. Otis Payne, at the turn of the century.

In 1932 Capt. Payne became associated with the Smith Meal Co. of Amagansett. He retired from fishing two years ago, but retained an active interest in the work and continued as port captain for the Smith Meal Co.

Boston Fish Landings Show Four-Million-Pound Gain

At Boston, fish landings for the first four months of the year ran four million pounds ahead of production for the same period of 1955. The figures are 54,298,000 pounds this year, against 50,298,000 in the previous year. The average price has held up a little better, being $7.36 per hundredweight this year, against $6.73 in 1955.

The higher average price has meant approximately $611,000 more to the boats and crews this year. Total return to the boats and crews for the four-month period was $3,996,332.

Egg-Bearing Lobsters Given to Hatchery

Francis W. Sargent, Marine Fisheries Director, last month accepted 200 offshore egg-bearing lobsters from the Fish & Wildlife Service for experimentation and hatching purposes at the State lobster station at Martha's Vineyard.

The lobsters, with an average weight of five pounds, were part of the 1,900 total catch of the research trawler *Delaware* which docked on May 11 at East Boston after a trip 210 miles from port. These lobsters were taken in the 175-225 fathom range along the edge of the Continental Shelf at the southern edge of Georges Bank. During the cruise the crew of the *Delaware* tagged and released 1,000 lobsters where caught offshore.

Howlett to Manage Caribou Fisheries

Robert W. Howlett has become general manager of Caribou Fisheries, Ltd., which is located on the Boston Fish Pier. Howlett formerly was connected with the Mid-Central Fish Co. of Portland, Me.

Tagged Lobsters Caught

Two tagged lobsters were caught on May 10 by the trawler *R. W. Griffin, Jr.* in the vicinity of Veatch Canyon. One of these was tagged and released from the research vessel *Delaware* on January 26 and had moved approximately 90 miles westward along the edge of the Continental Shelf. The other was tagged and released from the *Delaware* on May 1, and was recaptured in the same area as released.

Commercial Fishing in Largest Lake

(Continued from page 15)

Not far east from Brown Fisheries is the Dollar Settlement—a town called Brimley, Mich.—where a number of small, established commercial fishermen make their headquarters. From Brimley they fish the Whitefish Bay region in eastern Lake Superior.

In the Spring, Summer and Fall Brimley fishermen lay nets for whitefish and lake trout. In Winter, when ice covers the bay, they fish for herring and smelt, as well as for whitefish and trout.

Ice fishing with gill nets is a technique developed by the Indians back in early times. Fishermen drill holes through the ice about 2 feet in diameter, along the course of which they send under the ice a pilot line attached to a pole. The line at the farthest pole is pulled to bring the gill net, to which it is attached, in position—and anchored. The gill net is lowered to the bottom by means of the nylon lines (or ropes). When the net is lifted it is raised through the first hole, allowing a line to remain anchored at the farthest hole for re-setting purposes. The holes are usually 40' apart, and may run in a line as long as the gill net.

Fishing Operations in Munising Area

At Munising, Mich., lying between Grand Marais and Marquette on Lake Superior, Ray Adair has been one of the larger operators for 30 years. A former president of the Michigan Fish Producers Association, Mr. Adair is an advocate of more trout hatcheries and rearing ponds. Out of Munising several commercial fishermen operate gill and trap nets, fishing in the outer bay, Woods Bay, Grand Portal and Portal reef areas, as well as around Grand Island lying directly out from the bay.

Munising is one of the leading commercial and game trolling ports. During warmer weather it is alive with trollers. Winter fishing at Munising usually pays off nicely, particularly "bobbing" operations, or the hand-line fishing for trout. One hundred pounds of lake trout taken daily in Winter on a "bobbing" line is a lucrative catch.

Much the same fishing operations are seen in the Huron Bay area, and at Portage Entry. One of the larger fleets active in warmer weather is based at Chassel, Mich., and owned by Dormer Fish Co. of Menominee.

At Ontonagon, Mich., several large, established operators make their headquarters. They use gill nets, trap nets, and set-hook lines, fishing for whitefish, lake trout, herring, and occasionally "rough fish." Eagle Harbor and Copper Harbor commercial fishermen, mostly smaller operators, do likewise.

The fishermen in this area of Lake Superior have their favorite fishing spots, among which are Cranberry Reef, Green Reef, Panama Reef, Pinkerton Reef, Lone Rock Reef and Presque Isle Reef, west of Ontonagon. On the east there are 4-Mile Reef, Firesteele Reef, 10-Mile Reef, 14-Mile Point Reef, and Freda Reef, the latter one of the largest in the lake.

Isle Royale Fishermen Make Profitable Hauls

The few remaining commercial fishermen on Isle Royale, lying in mid-lake, always have made profitable catches of lake trout and whitefish. Their dories are equipped with outboard motors, and a few of the fishermen have larger, enclosed craft to protect them from gusty winds and splashing waves.

Reason for the dwindling number of commercial fishermen on the island is that Isle Royale became a National Park some years ago. The Federal Government permits fishermen who lived there at the time to continue operating from the Island as long as they live, but their fishing rights cannot be passed on after they die.

Outside the 4½-mile boundary of water surrounding the island, any licensed commercial fisherman may set his nets or trot lines and usually be assured of a profitable catch. For Isle Royale, like perhaps Michipicoten Island farther east but in Canadian waters, seems to be a lake trout haven.

Michipicoten Island, incidentally, is about 80 miles north of Sault Ste. Marie in the eastern end of Lake Superior. Situated some 20 miles off the Ontario mainland and the site of a commercial fishing settlement of about 100 persons, Michipicoten Island is reached by few persons from the "outside." Commercial fishing tugs take residents of the island to and from Sault Ste. Marie, where most of the trading is done and from where fish are shipped to metropolitan markets. A prosperous fishing village, Michipicoten Island is the headquarters of several large Canadian fresh-water fish producers.

Around the Apostle Islands, in western Lake Superior, Ashland, Bayfield, and Cornucopia, Wis., commercial fishermen produce great quantities of lake trout, whitefish, herring, smelt, etc. Chequamegon Bay, at the lower end of which lies Ashland, is considered one of the better fishing spots for commercial lake trout trollers in Lake Superior, as is the Apostle Islands area.

Booth Fisheries at Bayfield, Wis., buys huge quantities of fish from the producers in this area, and many fishermen ship their fish directly to Chicago markets. During the herring and smelt runs, the entire population of the towns often pitches in to take care of the huge catches.

Around the shores of Lake Superior are many other important commercial fishing ports. Some of them are mere villages; some are small towns; and others are sizable cities, such as Duluth and Superior, from which impressive fishing fleets operate most of the year in the western end of the lake.

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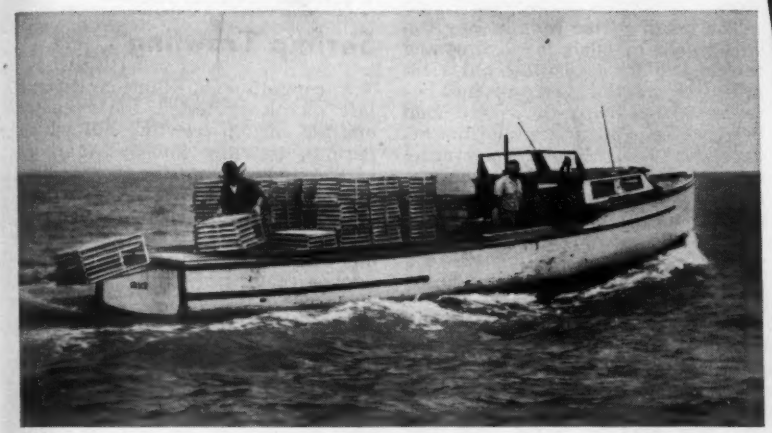
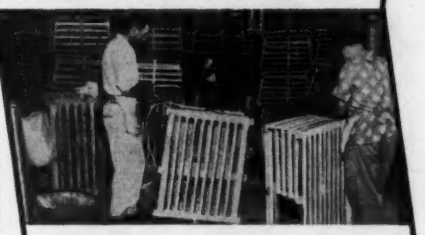
CHRYSLER MARINE ENGINES



Each boat—Judge, Stella and Grace (pictured)—is a Nova Scotia open-type hull built by Atkinson of Clark Harbor, Nova Scotia. Each boat makes about 15 miles per hour, powered with a Chrysler Royal Marine Engine.

Marker buoys not only mark location of traps but colors also indicate ownership. Left is Charles Ponzo, owner-skipper of **Grace,** with crewman John Hughes.



Lobster traps being prepared for setting. Frank Ternullo, left, owner-skipper of **Stella,** and crewman Charles Ternullo will bait traps and drop them so as to rest on or near rocks in 30 feet of water.

Good eating assured. Vincent Loguidice, left, owner-skipper of **Judge,** and crewman Gaetano Loguidice remove lobsters from trap. Each trip, boats bring in from 200 to 250 pounds of lobsters weighing from one to four pounds apiece.

YOU DON'T "baby" marine engines on a Massachusetts Bay lobsterman's schedule. Once the lobster season is underway, it's out at 4:30 A.M. seven days a week, back about 4:30 in the afternoon. While you're out you put in anywhere from 50 to 70 miles picking up or setting 400 or so lobster traps. In between trips you check over and repair traps and paint marker buoys.

On a tight schedule like this, a dependable marine engine is the difference between success and failure. Small wonder then, Chrysler Marine Engines are so popular with lobstermen in the Boston area.

Vincent Loguidice, Frank Ternullo, Charles Ponzo and thousands of other commercial fishermen along the eastern seaboard find Chrysler Marine Engines the fastest starting, most reliable and most economical marine engine ever built. They find all the important "extras" are standard equipment with Chrysler Marine Engines. You will, too, and you will also find that Chrysler Marine Engines are priced down with the lowest.

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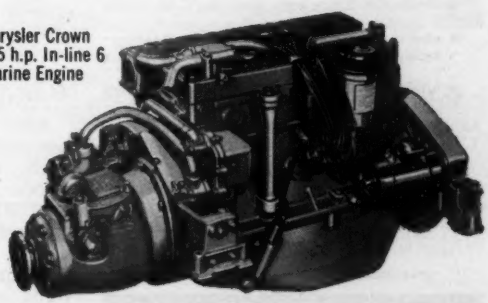

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Alabama to Adopt More Rigid Oil Exploration Regulations

The blasting to death of thousands of pounds of fish in Mobile Bay in early May resulted in the permit suspension of an oil explorations company and concerted efforts of the Alabama State Conservation Dept. to draw up rigid regulations designed to safeguard the sea life in Mobile Bay. A meeting will be held to formulate new regulations, which will be patterned closely after those which have proven successful in Louisiana. Upon adoption of the new regulations, the oil exploration company will be allowed to resume its work.

The death of the Mobile Bay fish was caused by offshore blasting, and the mass of dead fish covered a 10-mile area, most of them centered between Little Point Clear and Bon Secour Bay. Hulon Krause of the Independent Seafood Co., operating out of Dog River, stated that he was forced to fish in other areas due to the fish mortality. He stated that the dead fish were croakers, mullet and white trout, and estimated the amount at between 30,000 and 40,000 pounds.

It is claimed that the oil exploration firm used charges of up to 100 pounds of dynamite suspended in the water to make tests on State water bottoms. The company did not violate any specific terms, but the methods used were not believed suitable for Mobile Bay.

Regarding the suspension, Conservation Director Bill Drinkard commented: "Our best information is that it is customary in inside waters in this type of area to use smaller charges set in holes drilled in the bottom. Other States, after many years of experience, do not allow use of large charges without close supervision to be sure that the sea life in the area will be protected."

The State has several hundred thousands acres of offshore bottoms which have possible oil and gas values. They will be made available at some future time for leasing by oil companies. The State allows geophysical tests by permit so that oil companies may determine which areas they wish to lease.

New Channel to be Dredged

Bids were to be opened May 24 for dredging a new channel in the Gulf Intracoastal Waterway between Big Lagoon and Pensacola Bay, Fla. They will be received by Army Engineers at Mobile, Ala.

The old channel will be abandoned because waves and tidal currents make it hazardous to small craft and large tows.

Landings Show Decline

Receipts of fish and shellfish at Alabama ports during February totaled 590,000 pounds. Compared with the catch for the corresponding month of last year, this was a decline of 35 percent. Reduced yields of mullet and oysters accounted for most of the decrease. Many of the minor species registered increases in production.

South Carolina Group Protests Inshore Shrimp Trawling

A committee of Bluffton citizens last month protested the recently enacted shrimp trawling bill which permits trawling in bays, harbors and sounds along the coast. The group charged that inshore trawling is responsible for practically depleting the "pan fish" which once were plentiful in South Carolina tidewater streams.

Later in the month, G. Robert Lunz, director of Bears Bluff Marine Laboratory, released a statement relative to inshore shrimp trawling. He reported that he doubted if trawling had done as much damage to "pan fish" populations as was believed. He further stated that he has yet to find any biological connection between legal shrimp trawling in Calibogue Sound and the alleged disappearance of food fishes in Beaufort County rivers.

South Carolina's inland waters are closed to shrimp trawling for eight months of the year. This is twice to five times as long a closed season as any other South Atlantic or Gulf State law provides.

New Laws Will Aid Oystermen

New opportunities for profit from South Carolina's oyster industry as the result of recently revised statutes were cited recently by former Sen. George Warren of Hampton, chairman of the S. C. Wildlife Resources Commission. Perhaps the most important feature of the revised laws is the fact that owners and lessees of oyster bottom are encouraged to improve their beds because the new law protects the oysters from public harvest.

Also the Wildlife Resources Commission, through the division of Commercial Fisheries, is directed to establish and maintain oyster farms in each of the six coastal counties. From these beds the public will be entitled to gather oysters free for their own use. The two-bushel law remains in effect for a year in limited fashion pending establishment of the new areas.

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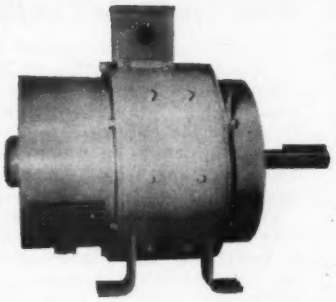

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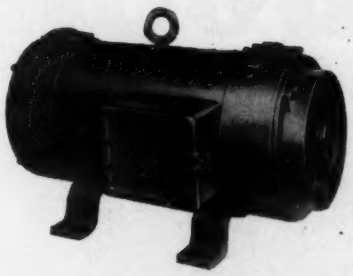

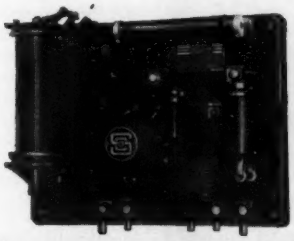

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Virginia Has Best Spring Run Of Croakers in Several Years

Commercial fishermen in Gloucester and in the neighboring counties of Mathews and Middlesex were wondering last month which is the least profitable situation—large catches at low prices or small catches at high prices. The best croaker run in several years loaded fishermen's nets for two days last month, but the abundant supply knocked dockside prices down to unprofitable levels for what is generally considered one of the most important commercial fish on the Virginia market.

Pound netters and haul seiners in Gloucester, Mathews and Middlesex Counties were bringing in hauls ranging from 100 to 400 boxes daily. A box weighs 100 pounds.

Research scientists from the Virginia Fisheries Laboratory in the 1952-53 season predicted a good run of croakers for this Spring, based on a three-year age group which would run three-fourths to one pound on the average.

Shad also are running abundantly in the Chesapeake Bay rivers, but commercial buyers said that prices were very poor, ranging down to one cent per pound.

Oyster Output Declines

Virginia's total oyster production from October 1, 1955 through March 1 of this year was some 500,000 bushels less than for the previous season. The total for the period was 2,143,800 bushels this season, compared with 2,692,100 bushels in the previous period.

Big Run of Hard Crabs

During May there was a big run of hard crabs in Tangier Sound, and potters caught from five to fifteen barrels a day. If warm weather continues, crab potting was expected to be even better this month.

Peeler crab catches also began to increase. According to reports, hand netters and scrapers were making good catches in Tangier Lagoon and along the shores all around the Island. They were taking from 400 to 1200 peelers a day.

Rappahannock River watermen were hoping warmer weather would boost their crab catch the middle of May, as the season on hard and soft-shelled crabs moved into its peak period. Although watermen have been crabbing along the Rappahannock since early April, the heaviest run of soft crabs was expected to start in mid-May and last through the middle of June.

At Irvington, Vernon Crockett, operator of a local crab house, described the early catch as very poor compared with last year. Crockett blamed the cold, rainy weather and said he expected the catch to improve with warmer weather.

Make Good Clam Catches

Clamming in the shallow waters or on the bars north of Tangier Island, according to reports, was good last month. The clams were large and fat, and the few who were clamming caught as many as 400 a day which they sold to the Tangier market for two cents each.

Pound fishing last month was only fair, with two or three baskets or bushels of food fish being caught per day. At times, however, pound fishermen made big hauls of menhaden—as many as 200 bushels, which they sold to crab potters for $1.50 a bushel.

Unusual Fish Caught

Specimens of two fishes usually found only in northern waters—the tomcod and the sea herring—were caught in Chesapeake Bay on May 29. According to W. H. Massmann, biologist and captain of the research vessel *Virginia Lee*, this was the first time the tomcod has been taken in Chesapeake Bay.

The sea herring caught were very small, herring this young never have been taken before in Chesapeake waters. The sea herring is not known to spawn in any numbers south of New England.

Massmann Discusses Shad

William H. Massmann, fishery biologist at the Virginia Fisheries Laboratory, spoke before a meeting of the American Fisheries Society in Pittsburgh, Pa. last month on the question of whether a large number of spawning shad produce equally great numbers of offspring.

Massmann also explained how it may be possible to predict the abundance of shad a year or more in advance. He uses information accumulated from fishermen's records and from surveys of the abundance of juvenile shad.

Hampton Roads Area Landings

During the month of May fish landings in the Hampton Roads area amounted to 3,228,000 lbs., which was half a million lbs. more than in the same month of last year, but a decrease of over a million lbs. from April, 1956. The lion's share of the May catch was taken from pound nets, with landings from this gear totaling 2,057,000 lbs., for a gain of nearly a million lbs. over May, 1955.

The leading variety was croaker, with 1,409,600 lbs., which was a million lbs. more than in May, 1955. Next was scup, with 602,300 lbs., for a decline of 200,000 lbs.

Florida Trying to Stamp Out Electrical Fishing

Director A. D. Aldrich said recently the State Game & Fish Commission is making special and expensive efforts to stamp out use of illegal "monkey" fishing in Putnam County. Use of electrical devices which stun fish for easy netting caused an uproar in the County recently, and resulted in an open feud between sports and commercial interests in the Lake George-St. Johns River area.

The Commission has purchased a high-speed motor launch for use in its law enforcement work, and has been assigning as many as 10 wildlife officers to the Lake George area. About $50 a day above normal operating expenses is being spent in attempts to enforce the ban against monkey fishing.

Duggan Heads Southeastern Association

The fourth annual meeting of the Southeastern Fisheries Association was held May 20-22 at St. Petersburg. There was much interest in individual meetings of the shrimp group and the fish group, with quality and promotion being the main subjects of discussion. Elected president of the Association for the coming year was J. Roy Duggan, SeaPak Corp., St. Simons Island, Ga.

To Construct New Seafood Freezer

The Southland Frozen Foods, Inc. of Panama City is planning to construct an addition to its large plant for the purpose of packaging and freezing shrimp and other seafoods. Work on this addition is expected to get under way sometime this Summer.

Red Tide Rumor False

The Florida west coast can breathe easier. Those patches of discolored water seen in the Gulf of Mexico recently are not the fish killing red tide. They were caused by a mass bloom of diatoms, a minute floating plant form which furnishes food for many fish.

Present conditions are not favorable for a red tide outbreak, but fishermen have been asked to keep a lookout for patches of floating dead fish.

Loran Is Useful Navigation Tool

(Continued from page 13)

Action begins at the master station. It originates a transmission which speeds out in all directions like the ripple from a pebble dropped into a pool of water. As the signal passes over the slave station—normally situated some 200 to 300 miles down the coast—it triggers off a similar pulse which is transmitted by the slave (after a brief, calculated time delay).

The difference in time, measured in fractions of a second, or "microseconds", that it takes for the two waves to reach the navigator's position (with an allowance for the time delay) is the key bit of information needed to solve the Loran riddle. The receiver automatically translates this difference into a visual reading which the navigator jots down. Applying this reading to a special crisscrossed Loran chart, he comes up with a gently curving line of position. His ship, he now knows, is somewhere along this line.

By tuning to a second pair of stations, he can get another reading and hence another line of position. Where the two curved lines of position cross is his "fix". If he can pick up yet a third pair of stations and get a "three-cornered" fix, so much the better. Or, to check himself further and get an even more refined solution, he may take his Loran fix, transpose it to an ordinary geographic plot, and then cross it with other lines of position from star sights, sun sights, or radar ranges or bearings, or radio direction finder bearings.

E. R. Cross, author of "Self-Contained Diving for Fun and Profit," a new home study course in diving
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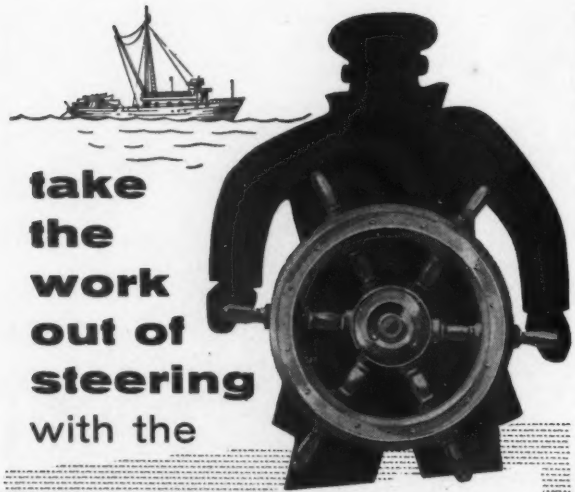

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Mid-Water Trawls to be Tested

(Continued from page 12)

the calculated depth of the towing point from the wire angle. It also was determined by this instrument that the top of the arch of the headrope was about 40-45 feet above the lead-line.

After several days of experimentation, it was possible to establish a relationship between the observed wire angle and the depth at the bottom of the trawl (lead-line) as recorded by the bathythermograph.

Speed of Tow

The approximate towing speed was 3 knots, but this varied, particularly in strong tidal waters in narrow passes. The rpm. of the engine was changed to meet the required wire angle of the towing warp over the stern of the vessel when towing in an ebb or flood tide.

The speed of the vessel never should be decreased when hauling the gear in relatively shallow water. It was found that the gear might sink as much as 12 fathoms when the speed is decreased by approximately 1 knot during the hauling operation. Hence there is the danger of tearing the net on the bottom. Both the sweeplines and towing warp were wound together on the drums of the winches. As soon as the otter-boards were brought to the surface and were hung from the stanchions the remainder of the sweep-lines were winched in.

The wings and body of the net were taken aboard in the conventional manner used by trawlers rigged with Pacific Coast or double gear where stanchions are mounted on the stern quarters. The herring which were killed became bloated with the change in pressure when the net was brought to the surface, and hence assisted in floating the cod-end.

Preparation of Cod-End for Brailing

Once the net had surfaced, speed and efficient handling of the net by the crew was required in preparing the cod-end for brailing. The wings and body were piled quickly on the stern and re-stacked after brailing before the gear was set out again. The vessel was reversed slowly to bring the cod-end alongside the bow.

Once the wings and body of the net were aboard, the vessel was swung into a position so that the cod-end lay along the starboard side of the vessel with the tip of the cod-end itself near the bow. Immediately the front section of the cod-end (where the 1¼" mesh joins the 3½" mesh) was "choked off" by a rope strap, about 10 feet ahead of the starboard stanchion. When the gear was being hauled the "Legaze Pole" (Fig. 2) amidships and bow pole or fore-boom were lowered to about 45° over the starboard side of the vessel. As soon as the front section of the cod-end was pinched off, a crewman picked up the haul-back line which was attached for convenience in handling to the forward end of the zipper, and proceeded with the line to the bow of the trawler. The haul-back line was a continuation of the same line that was used as a poke string. The last section of the cod-end was lifted clear of water by the fore-boom so that the poke string could be untied.

It was very important at this point to untie the poke string and re-close the cod-end opening by a rope strap or sling which could be made fast to the tackle on the fore-boom. Should the herring die quickly and start to sink, the strap can be released and the cod-end passed overboard so that the herring will escape, thus preventing the gear from being lost.

It took about 15 minutes to haul the gear to the surface, fleet the wings and body of the net and bring the cod-end along the starboard side of the vessel.

Getting "Zipper" Ready for Brailing

The purpose of the "zipper" is to provide an opening in the cod-end in the shape of a pond, through which the herring can be brailed aboard the trawler (Fig. 2). As soon as the zipper was laid on the starboard rail from the

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stanchion to the rigging amidships, the braided nylon line which closes the zipper was released, and the inner edge of the zipper was laced to the railing of the vessel.

The outer edge of the zipper was immediately laced to the parallel pole or bar, beginning at the forward end near the rigging amidships and working aft. Three rings at the front end of the zipper were left free. This permitted the front end of the zipper to spread away from the side of the vessel. Lacing of the zipper to the railing and the parallel pole commenced with the fourth ring.

The forward end of the parallel pole was made fast to the rope which passed through the block at the end of the "Legaze" pole, and supported the forward end of the parallel pole above the water. Before lowering the forward end of the parallel pole over the side of the vessel, the outrigger pole was lashed at right angles across the after end of the parallel pole. A five gallon buoy-keg was lashed underneath the junction of the poles and its purpose was merely to assist in pushing out the outrigger pole perpendicular to the side of the vessel. The inner end of the outrigger pole was butted against the side of the vessel and lashed through the scuppers and over the starboard railing. A guy line from the junction of the parallel and outrigger poles which was made fast to the stanchion, held the aft end of the parallel pole and outer end of the outrigger pole clear of the water.

From the time the cod-end lay alongside the starboard side of the vessel the complete operation of preparing the zipper ready for brailing, (to this stage) by a five-man crew, took between 4 and 5 minutes.

"Drying up" is the term used in lifting the cod-end up on the fore deck of the vessel with the fore boom or bow pole (Fig. 2), so that the herring can swim directly to the zipper opening where they can be brailed. If 25-30 tons of herring are caught, the net can be dried up solidly almost immediately. With a larger catch a number of brails of herring should be removed at first, before drying up the cod-end completely. About 65 to 75 tons of herring can be handled successfully in this manner.

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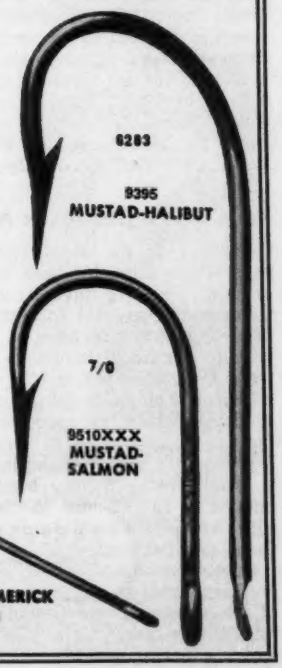

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EQUIPMENT and SUPPLY NEWS

Red Wing Buys Kermath "Sea Raider" Line

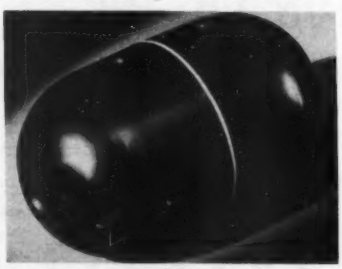
Another step in their expansion program was announced recently by the Red Wing Marine Corp., Red Wing, Minn., with the purchase of the manufacturing rights, parts and service operations for the Kermath "Sea Raider" line of gasoline engines. The purchase includes the Sea Raider 275 hp. Six, and the Sea Raider V-12 Special 580 hp. model.

These engines added to Red Wing's line of gasoline models from 10 to 150 hp. now afford boatbuilders and users a very complete range of gasoline marine engines. In addition, Red Wing's line of marine Diesels is being augmented by new turbocharged units developing up to 500 hp.

According to William H. King, vice-president of the 52-year-old Red Wing firm, in the past few months the entire plant has undergone a modernization program which is expected to increase its manufacturing capacity by 50 percent. In the near future, King said, several new products, both in and out of the engine field, will be introduced by the company.

Shepherd Offers Plastic Shrimp Net Roller

A new shrimp net roller introduced by J. H. Shepherd Son & Co., is made from high impact strength hard plastic, and is especially resistant to the effects of abrasion. The shrimp net roller is constructed in much the same manner as a float, except that it has holes in each section to permit water to enter and thereby hold the roller on the ocean floor. This novel design provides a weighted roller when in use, but at the same time results in a lightweight, easy-to-handle roller when out of the water.



Shepherd plastic shrimp net roller, measuring 8¾" long by 5" in diameter, with 13/16" center hole.

For maximum rigidity, Shepherd shrimp rollers utilize a solid bulkhead bonded between the two halves. Additional information, prices and a sample of the shrimp net roller can be obtained by writing The J. H. Shepherd Son & Co., 1820 East Blvd., Elyria, Ohio.

New Book Contains Many Boat Designs

Volume II of "Boats Today", which is just off the presses, contains 151 boat designs representing the works of 88 well-known naval architects from the United States, Canada and several foreign countries. The price is $1.00 per copy, and the book is available from all Universal marine engine distributors and dealers, as well as direct from Universal Motor Co., Oshkosh, Wisc.

This 132-page "boat show" in print includes profile, accommodation, perspective and cutaway drawings, plus factual descriptions, of many types and sizes of boats. Included are a 36' trolling boat design by William Garden; a rough water fishing boat design by Quent Williams, offered in 28', 32' and 36' sizes; and a 23' power boat design by Eldredge-McInnis, Inc., for use with Atlantic Coast salt fish bankers.

Printed with a vivid red and black varnished cover, the book includes a complete up-to-date alphabetical listing of all American and Canadian naval architects, and also tells which plans are available. There is a special section which contains designs and details on boats with V-Drive.

New Distributorship for Lister-Blackstone

R. A. Lister & Co., Ltd., has announced that its totally-owned subsidiary, Lister-Blackstone, Inc., will exclusively distribute and service all Lister and Blackstone Diesel engines in the United States.

B. D. Fish

B. D. Fish has been appointed Eastern Regional Manager of Lister-Blackstone. He joined the company in 1942, serving as Chief Inspector, Quality Control Manager and Superintendent of Plant. He left Lister-Blackstone when the distributorship was transferred to National Supply Company, and later to White Diesel. Mr. Fish served National and White as branch manager for the New England area.

New headquarters have been established at 42-32 21st Street, Long Island City, N. Y. At this address executive offices and warehousing facilities for parts and engine stocks will be maintained, and technical staff will be available. The Lister line of Diesels ranges from 3½ to 600 hp., and includes a new air-cooled Diesel for marine use.

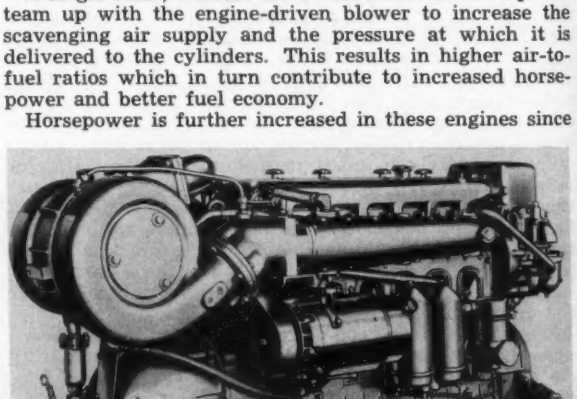
New General Motors Turbopower Diesel

Increased horsepower and better all-around efficiency at all engine loads are attained in a new General Motors Series 71 Turbopower Marine Diesel. The new engine is a six-cylinder unit, rated 280 basic horsepower at 2300 rpm., and is available with right or left-hand rotation, in either cast iron or lightweight (aluminum) models.

The cast iron unit complete with fresh water cooling system and GM reverse and reduction gears weighs less than 11 pounds per horsepower. The weight of the aluminum engine is only nine pounds per horsepower.

A single-shaft, exhaust-driven turbine and air impeller team up with the engine-driven blower to increase the scavenging air supply and the pressure at which it is delivered to the cylinders. This results in higher air-to-fuel ratios which in turn contribute to increased horsepower and better fuel economy.

Horsepower is further increased in these engines since



New General Motors Turbopower Marine Diesel, rated 280 hp.

the air impeller, supplementing the air supply to the cylinders, helps reduce the power required to operate the engine-driven blower. The resulting saving in power is released for use at the flywheel.

Changes have been made in the cylinders of the GM Turbopower engine to take care of the increased air supply and the corresponding increase in exhaust gases. The air-intake ports are larger in size and extend to a higher level on the cylinder liners. This feature permits a greater charge of air to enter the cylinders and allows the ports to remain open for longer air-intake periods.

A fast and complete discharge of exhaust gases in GM Turbopower engines has been attained by increasing the exhaust valves per cylinder from two to four. The valves are activated by rocker arms on the head as in the Series 71 engine, but each rocker arm activates two valves. This is accomplished by a bridge piloted on a vertical shaft screwed into the cylinder head. The bridge is adjusted to contact each valve equally and the valve lash is accomplished as in the non-turbopowered engine.

Complete specifications on the new Diesel can be obtained from Detroit Diesel distributors and dealers, or by writing the Detroit Diesel Engine Division, General Motors Corp., Detroit 28, Mich.

Charles B. McManus has been appointed Eastern Regional Manager for Bendix-Marine, and will represent the firm in the Northeastern section of the United States. Prior to his joining Bendix, Mr. McManus was Philadelphia branch manager for Raytheon. At one time he was part owner of a fishing business known as Birch & McManus Co. at Montauk, L. I., New York. Mr. McManus served with the U. S. Coast Guard for four years during World War II as officer-in-charge on sub and convoy patrol vessels.

Nordberg On-Board Spare Parts Kit

Nordberg Manufacturing Co. has announced the availability of an On-Board Spare Parts Kit, which contains everything necessary to make emergency repairs. The kit was specifically designed for owners of Nordberg six-cylinder gasoline marine engines, and it insures that correct fitting parts are on hand when they are needed.

The factory-inspected spare parts are carefully packed in a strong, fabricated steel box. Included in the kit are a fuel pump, oil filter element, coil, distributor cap, breaker plate assembly, distributor rotor, nipples, ignition wire, sparkies, six spark plugs and a can of lacquer spray.

Various capscrews, washers and cotter pins, pet cocks, hose clamps and water pump parts also are included. The On-Board Spare Parts Kit may be obtained from any Nordberg gasoline marine engine dealer or by writing directly to Nordberg Manufacturing Co., Milwaukee 1, Wisc.

Gladding Representing Flexible Lacing

Al Gladding is now representing Flexible Steel Lacing Co. in the Northeast States. He takes over the territory formerly covered by Les Coleman, who has been transferred to the Chicago Sales Department, where he will assume new and increased responsibilities.

Mr. Gladding is not new to Flexible Steel. For the past three years he has operated a distributing organization handling REMA rubber repair materials.

Flexible Steel manufactures belt fasteners for joining conveyor and transmission belts and self-vulcanizing rubber repair materials, which are available from Flexco-Alligator distributors throughout the country.

Appointed to new positions in Enterprise Engine & Machinery Company's Sales Department recently were, from left to right: J. E. Barthmaier, who is now New York branch manager; R. F. (Ray) Baumann, Boston branch manager; and E. W. Robinson, Philadelphia district sales manager.

Changes in Enterprise Engine Sales Dept.

J. E. Barthmaier recently was named New York branch manager for Enterprise Engine & Machinery Co., San Francisco. Following Barthmaier's transfer from Boston, R. F. (Ray) Baumann was appointed Boston branch manager. And in a third appointment, E. W. Robinson was named Philadelphia district sales manager.

Barthmaier's 22 years in the Diesel power field include the four past years as Boston branch manager for Enterprise. At New York, he will be in charge of the Enterprise sales staff and extensive parts warehouse.

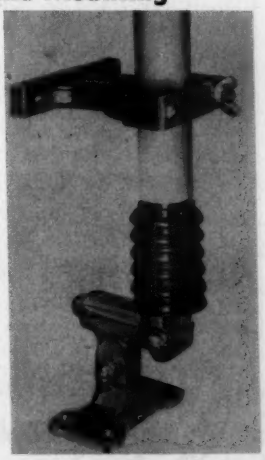
With 8½ years experience in Diesel operation, design, and sales, Baumann has been with Enterprise since mid-1954, serving the Diesel field in Maine, New Hampshire, Vermont, Massachusetts, and the east end of Connecticut. Baumann's background includes degrees in mechanical engineering and business administration.

Robinson manages Enterprise sales in Delaware, Maryland, Virginia, North and South Carolina, eastern Pennsylvania, and portions of New Jersey. Particularly serving Diesel engine requirements of the marine and stationary industry, Robinson has had extensive marine experience on the entire Eastern seaboard over a period of 15 years. He is a member of the Society of Naval Architects and Marine Engineers.

Webster Improves Antenna Mounting

An improved version of the AM1-B universal antenna mounting assembly recently has been announced by Webster Manufacturing Co., 242 Shoreline Boulevard, Mill Valley, Calif.

An entirely new top support bracket of high strength plastic permits the antenna support column to be easily disengaged without unfastening the permanently-secured portion of the bracket. The heavy brass piece which normally holds the antenna securely, pivots to free the column when the wing-nut is loosened. A plastic compression piece which bears upon the antenna column insures a snug fit within the slot in the top bracket. All metallic parts are chrome plated brass.



Webster antenna mounting assembly.

The sturdy lower bracket provides a full 90-degree swing in every direction away from the cabin of the boat, thereby eliminating any hazard of breaking the antenna or "stretching the hardware" during the stowing or unstowing process. The design obtains the full swivel action without relying on ballsocket linkages, provides take-up

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cap nuts on movable elements to compensate for wear under conditions of severe vibration.

The ribbed base insulator of molded high impact plastic provides a leakage patch greater than five inches. The insulator fits any 1⅜" I.D. antenna column. Adaptors also are available for columns of smaller diameter.

Two New Graymarine Service Manuals

Two new service books published and copyrighted by Gray Marine Motor Co., Detroit 7, Mich., include a complete shop manual on Paragon hydraulic reverse gears (price $1.00) and a well illustrated manual entitled "Identification of Parts, Graymarine Gasoline Engines" (price 50¢).

These two are the most recent in a long series of Gray service manuals published since the War, including those on Gray's new Diesel marine engines. They are all designed to give owners and engine mechanics complete data on all phases of maintenance and repair of Gray engines.

Gray's 96-page Maintenance Handbook, sent free with every engine, is revised yearly.

Sudbury Gets Patent on Aqua-Clear Feeder

Sudbury Laboratory, South Sudbury, Mass., has been granted a patent covering the Aqua-Clear Feeder, an invention of H. J. Atkinson, director of the Laboratory. There are now more than 35,000 users of Aqua-Clear feeders and Aqua-Clear crystals, which are generally recognized as one of the most satisfactory ways of combating rust and corrosion in marine engines.

Northill Air-Lung Used in Filming Movie

The Northill air-lung made its debut into a new phase of underwater operations recently, when it was used during filming of Universal-International's subsurface movie thriller, "The Creature Walks Among Us". The entire cast (using Northill air-lungs) acquired the skills of scuba diving at Ft. Myers, Florida, where underwater scenes for the film were shot.

The Northill air-lung was designed by one of the foremost manufacturers of air pressure controls, the AiResearch Manufacturing Co., a division of Northill's parent company, The Garrett Corp. It has been tested and is being manufactured to the most rigid aircraft and marine specifications, and is precision built for trouble-free durability and effortless swimming. The air-lung has been approved and is being used by the U. S. Navy.

Luxon Magill trolling planer.

Luxon Magill Trolling Planer

The Luxon Magill trolling planer, manufactured by Art Wire and Stamping Co., Newark, N. J., has proved advantageous in commercial fishing. The trolling planer is available wherever fishing accessories are sold.

Nils Johnson, president of Art Wire & Stamping, reports that the Luxon Magill trolling planer is especially valuable in commercial fishing for king mackerel. Whereas it formerly was necessary to use as much as five pounds of lead to attain the proper trolling depth for kingfish, this is claimed to be a thing of the past with the Luxon Magill #5 trolling planer.

The new trolling planer also has proved advantageous in catching reef fish, including grouper and red snapper.

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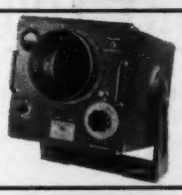
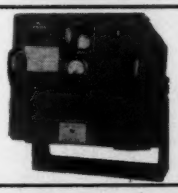
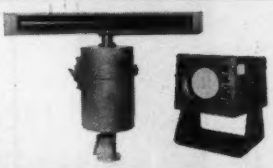
EDO FISHSCOPE Most advanced fish finding device on the market, available in three versions for deep and shallow fishing. Spots fish on CRT at depths to 400 fathoms, then magnifies any 10-fathom sector 20 to 40 times for clearer view. Compact design, single transducer.



EDO LORAN Compact, direct-reading aid to long-range navigation. No special training required to operate. Fix obtained from single, 28-tube unit in matter of seconds, regardless of weather or sea conditions. Absolutely accurate though relatively low in cost.



EDO RADAR For long and short-range navigation in any weather. CRT display gives clear picture on 1, 2, 5, 10 and 20-mile range. Patented slotted waveguide antenna, mounted on transmitter, assures superior definition. Ideal where space and generator capacity are limited.



EDO CORPORATION College Point, L.I., N.Y. SINCE 1925

New Jersey Clammers Idled by Price Dispute

Striking Wildwood clam boatmen voted the end of May to join the Amalgamated Food and Allied Workers Union of New Jersey. The strike followed a dispute over prices for clams, with the workers seeking a raise from the $1.50 per bushel price.

The clammers reaffirmed their determination to seek payment of $2 per bushel. The dispute in Wildwood, affecting 120 boatmen and more than 100 cannery workers at the F. H. Snow Canning Co., resulted from a demand of the plant manager that the boatmen give a heaped, funnel-shaped bushel.

The boatmen claim that the new measure actually consists of a bushel and a half, and represents a substantial wage reduction. Union spokesmen said they will insist upon $2 for a struck bushel, acceptable both to the union and the Federal Bureau of Weights and Measures. The clam plant offered the boatmen $1.75 for a heaped bushel for a 3-year period, but this was refused.

Oystermen Lost at Sea

Four New Jersey oystermen were lost at sea last month when two oyster boats capsized. Three of the drowned fishermen were members of the crew of the oyster boat *Phyllis* which capsized four miles off Sea Breeze Point. They included Willard Robbins, 45, and Rufus Davis, 54, both of Port Norris; and Paul Robbins of Mauricetown. Two fellow crewmen were rescued and reported a heavy sea had come over the stern, shifting the load of oysters and capsizing the boat.

Five miles south of Port Norris, near Money Island, another 40' oyster boat developed a leak after she had been battered around in the high seas. The skipper, Fred Green of Fortescue, was aboard with his nephew Roy Green of Millville. When the craft overturned, the younger Green clung to the hulk and held his uncle afloat, but the elder Green died of exposure before they were spotted from shore.

"Jennie" Nets Atom-Powered Sub "Nautilus"

Capt. Tonnes Anderson, skipper of the 67 ft. fishing boat *Jennie*, while on a fluke fishing trip off Point Pleasant last month really snared a big one—the atom-powered submarine *Nautilus* on her way to Groton, Conn. about 150 ft. below water.

As the *Jennie* passed over the submarine the net caught the superstructure and the fishing vessel was pulled backwards about 20 knots per hour. The stern, where the net was attached, kept sinking lower as the ship backpedaled.

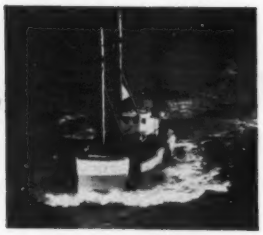
For a while it looked as if the *Jennie* might be dragged to the bottom, but the net cable snapped and the submarine headed into Groton, its captain unaware of the sea drama which had taken place above him.

When the submarine came up the crew found the torn fishing net draped around the superstructure. The sub's only damage was a broken running light. Anderson submitted his bill to the Fourth Naval District at Philadelphia for $1,300, for loss of the net, cable and fishing gear.

Seafood Production Shows Gain

Receipts of fish and shellfish at New Jersey ports during February amounted to 3.2 million pounds valued at $509,000 to the fishermen. Compared with the landings reported for the corresponding month of last year, the catch was 14 percent greater. Increased landings of fluke, cod and surf clams accounted for most of the gain. Bay scallops continued to be taken in quantity from Barnegat Bay waters, with 101,000 pounds of meats valued at $95,000.

HIGH SEAS-DRY YOU!



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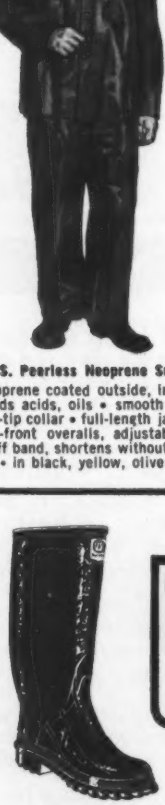
U. S. Peerless Neoprene Suit
• Neoprene coated outside, inside • sheds acids, oils • smooth corduroy-tip collar • full-length jacket • bib-front overalls, adjustable • cut-off band, shortens without raveling • in black, yellow, olive drab

U. S. Ruff-N-Tuff Eureka Suit
• strong, heavy-coated fabric • vulcanized waterproof seams • inside fly front • corduroy-tip collar • bib-front overalls • elastic suspenders • cut-off band, shortens without raveling • in black, yellow



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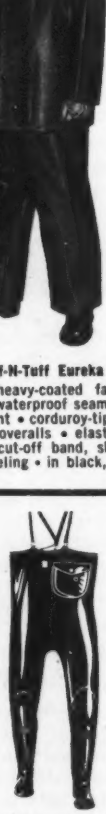
US ROYAL FOOTWEAR



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US RUBBER **United States Rubber**

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Louisiana Shrimpers Report Upturn in Production

Shrimp producers of Morgan City, Berwick and Patterson reported a catch during the month of April amounting to 236,060 pounds, approximately three times as much as production the preceding month.

Since November 1955 when the volume produced by local shrimpers totaled approximately 378,000 pounds, there has been a steady decline each month. In March, 1956, the catch amounted to only about 79,700 pounds.

The fleet of fishing boats was larger in April than it has been in some time. A number of local trawlers whose owners had tied them up rather than make unprofitable trips, returned to the shrimp grounds in April. In addition, several trawlers fishing off the coast of Texas or other States moved over to Louisiana for the Spring run.

Oyster Reefs Closed

The seven-member Louisiana Wild Life and Fisheries Commission at a recent meeting voted to close the natural oyster reefs located east of the Mississippi River beginning at midnight April 30. However, seed oysters could be taken from the reefs between April 30 and May 20 by securing a permit from the Commission.

All natural reefs along the Louisiana coast are to be closed May 20 through August 31.

Tax on Menhaden Catches Proposed

A tax measure was introduced in the Louisiana House May 30, proposing a $3 per ton levy on menhaden or other fish caught, seined or taken from Louisiana waters for purposes other than food. Rep. Sidney Sylvester, who sponsored the measure along with Rep. Frank Diesi, said no such tax is now levied. Both are from St. Landry Parish.

Sylvester's bill specifically exempts shrimp, oysters, and all fish, shellfish, crabs, crayfish and varieties of fish commonly referred to as seafood and used for human consumption.

Kellett Named Universal Engine Distributor

Kellett Industries, Inc. of 1216 Magnolia St., New Orleans, La., has been appointed distributor of Universal marine engines and marine-type lighting plants for Louisiana. Kellett will carry a complete line of Universal engines and service parts.

F. F. J. Kellett, president, and Walter T. Dorvin, vice-president and manager, will be active in the marine end of the business.

FAO Aiding in Mechanization Of India's Fishing Fleet

The potential market in India for small fishing boats, small marine engines, nylon nets, winches and wire warps has come a step nearer realization through the recent work of experts of the Food and Agriculture Organization.

Four factors point the way: (1) FAO master fisherman G. S. Illugason, who comes from Iceland, has demonstrated that with nylon bottom gill nets, Indian fishermen can increase catches by 500% and earnings by 300%; (2) Illugason has discovered a vast shrimp trawl ground extending at least 140 miles down the malabar coast, from Mangalore south to Beypore; (3) he also has found evidence of substantial stocks of sardines, mackerel, catfish, sharks and soles on the east coast of India; and (4) the Madras State Government has drawn up a Five Year Plan for the development of fisheries, including provision for mechanized boats. The first twenty 30' boats, designed by FAO naval architects, are nearing completion.

BOAT CATCHES

For Month of May

Hailing fares. Figure after name indicates number of trips.

GLOUCESTER (Mass.)

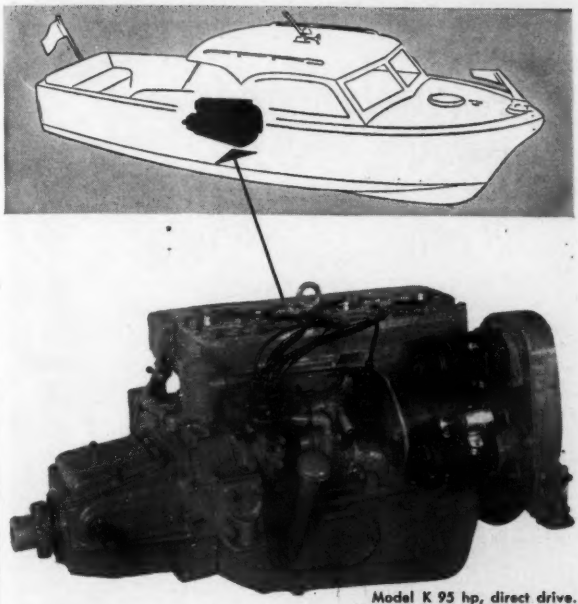
Acme (1)	2,000	Lady of Good Voyage (1)	101,500
Addie Mae (1)	500	Lady of the Rosary (3)	38,500
Admiral (1)	43,500	Linda B. (9)	31,500
Alden (4)	72,000	Little Joe (6)	18,500
American Eagle (5)	172,000	Little Flower (6)	35,500
Anna Guarino (12)	34,000		
Annie (6)	10,000	Madonna Di Siracusa (3)	3,500
Annie & Josie (8)	21,000	Margaret Marie (4)	31,500
Annie & Lucy (1)	3,000	Margie L. (9)	11,000
Anthony & Josephine (6)	13,500	Maris Stella (2)	320,000
Atlantic (1)	15,000	Mary (9)	20,000
		Mary Ann (7)	347,500
Baby Rose (1)	95,000	Mary E. (9)	9,500
Bonaventure (6)	725,000	Mary Jane (1)	180,000
		Mary Rose (2)	326,000
Cape Cod (7)	27,000	Morning Star (1)	3,500
Carlannsul (3)	21,500	Mother Ann (1)	240,000
Carlo & Vince (5)	99,000		
Catherine B. (7)	746,000	Nancy & Maria (8)	14,000
Charlotte M. (1)	130,000	Natale III (4)	78,000
Cigar Joe (4)	191,000	Njorth (1)	1,000
Clipper (2)	310,000	No More (7)	9,000
Columbia (3)	471,000		
Curlew (2)	345,000	Ocean Clipper (1)	96,000
Cushmere (1)	240,000		
		Peggy Belle (1)	1,000
Dawn (13)	38,000	Pioneer (12)	17,500
Dolphin (2)	155,000	Princess (1)	2,000
Doris F. Amero (4)	276,500	Priscilla (3)	2,500
		Prosperity (9)	21,000
Eagle (3)	557,000		
Eddie & Lulu M. (4)	8,500	Rose & Lucy (2)	72,500
Evelina M. Goulart (1)	100,000	Rosemarie (1)	7,000
Eva M. Martin (2)	2,000	Rosie & Gracie (7)	59,000
Eva II (9)	17,500		
Evelyn C. Brown (1)	285,000	Sacred Heart (9)	17,500
		St. Anna Maria (6)	33,500
Falcon (12)	40,500	St. Anthony (5)	632,000
Figueira DaFoz (2)	240,000	St. Cabrini (5)	134,000
Florence & Lee (1)	200,000	St. Francis (7)	47,500
Flow (2)	505,000	St. John (9)	18,500
Frances R. (4)	83,000	St. Joseph (1)	7,000
Frankie & Jeanne (8)	10,000	St. Mary (10)	70,000
		St. Nicholas (2)	292,000
Gaetano S. (1)	151,000	St. Peter (6)	267,500
Gertrude E. (10)	9,500	St. Providenza (10)	28,500
Giacoma (7)	32,000	St. Rosalie (3)	132,000
Golden Dawn (3)	21,000	St. Stephen (4)	18,000
		St. Terese (6)	208,000
Helen M. (6)	126,000	Salvatore & Grace (4)	302,000
Holy Family (2)	328,000	Sebastiana C. (5)	320,000
Holy Name (5)	175,500	Serafina N. (2)	26,500
		Serafina II (3)	20,500
Ida & Joseph (6)	372,000	Sunlight (1)	93,000
Immaculate Conception (4)	64,000		
		Theresa M. Boudreau (2)	445,000
Jackie B. (5)	13,500	Tipsy Parson (13)	20,000
Jackson & Arthur (6)	16,000	Trimembral (2)	5,000
Jennie & Lucia (1)	20,000		
Joseph & Lucia (1)	150,000	Vagabond (2)	165,000
Joseph S. Mattos (1)	210,000	Victoria (6)	5,000
Josie II (11)	33,000	Villanova (1)	245,000
Judith Lee Rose (2)	670,000	Vincie N. (4)	288,500
		Virginia Ann (6)	24,000
Kelpie (1)	1,000		
Killarney (1)	150,000	We Three (6)	19,000
Kingfisher (1)	180,000	White Owl (11)	23,500
Kurta (1)	1,000	Wild Duck (3)	485,000

Scallop Landings (Lbs.)

Brother Joe (1)	4,000	Michael F. Densmore (2)	21,000
Cap'n Bill (2)	14,000	Rita B. (1)	9,000
Francis L. MacPherson (1)	11,000	St. Stephen (1)	10,000
		Skilligolee (1)	9,000

STONINGTON (Conn.)

America (2)	3,000	Lisboa (2)	1,200
Averio (12)	11,300	Little Chief (9)	9,200
Bette Ann (12)	18,200	Luann (2)	1,700
Carol & Dennis (2)	3,200	Marise (17)	20,900
Carolyn & Gary (14)	23,500	Mary H. (17)	17,700
Connie M. (18)	28,600	Old Mystic (14)	14,900
Fairweather (20)	44,800	Rita (2)	1,200
Five Sisters (2)	1,800	Rose Mary (2)	2,800
Irene & Walter (18)	50,400	Weezie May (5)	5,100
Jane Dore (16)	18,900	William B. (18)	41,900
Lt. Thos. Minor (16)	12,400	William D. (2)	6,100



Model K 95 hp, direct drive. Also available with 1½:1 and 2:1 reduction and opposite rotation

It takes both boat-building and engine-building experience to bring you the world's finest marine engines!

. . . and, Chris-Craft marine engines are your best buy for very sound and practical reasons. Chris-Craft is a major producer of marine engines and is also the world's largest builder of motor boats. This combination of engine and boat building experience is your assurance that a new Chris-Craft marine engine installed in your boat, has been thoroughly proved under all marine conditions.

For example, the popular Chris-Craft 95 horsepower Model K (shown above), like all Chris-Craft marine engines, delivers outstanding performance, matchless economy and enduring service – for both pleasure craft and work boats.

Horsepower for horsepower, you can't beat a compact, power-packed Chris-Craft marine engine! Choose from 60, 95, 105, 120, 130, 131, 145, 158, 175, and 200 hp models. Most are available with reduction drives, opposite rotation, and famous *Chris-O-Matic* (electric hydraulic clutch control). See your Chris-Craft dealer for further information. Or write us direct!

SPECIFICATIONS

Cylinders.....6	Compression ratio.....7.35:1
Bore.....3 7/16 ins.	95 hp.....at 3200 rpm
Stroke.....4½ ins.	Standard coupling bore (other sizes available).....1 in.
Piston displacement.....229.7 cubic ins.	

Chris-Craft

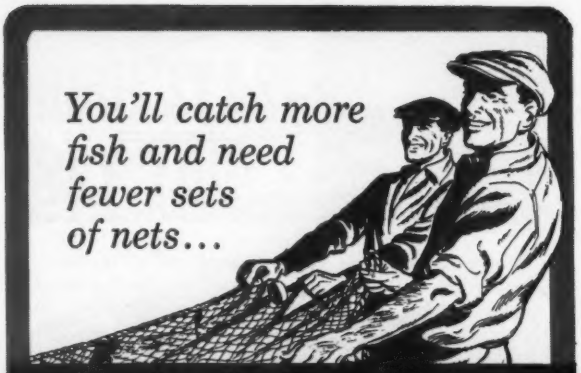
MARINE ENGINE DIVISION

CHRIS-CRAFT CORPORATION, ALGONAC, MICHIGAN

MOTOR BOATS • MARINE ENGINES • BOAT KITS

SEA SKIFFS • OUTBOARD CRUISERS

WORLD'S LARGEST BUILDERS OF MOTOR BOATS



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Tests have proved that this BONDED Netting*

- catches more fish
- stays cleaner and whiter longer
- has less knot slippage
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- is much easier to handle
- needs no drying—no preservatives

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DALE PLASTIC FLOATS

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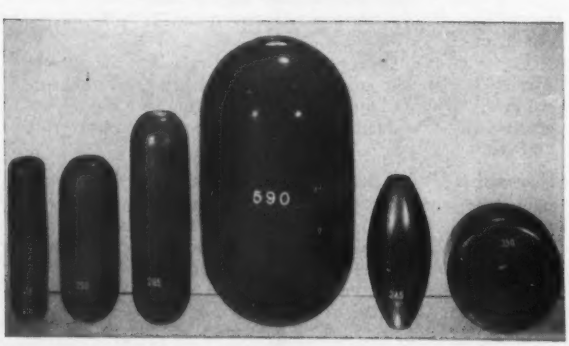

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ALL GILL-NET SIZES FROM 1⅛" x 5" to 5" x 9"
ALSO SEINE NET FLOATS

Contact Your Local Distributor Or Write For Information
Dealer Inquiries Invited

DALE PLASTICS CORPORATION

"Finest Floats Afloat"

5736 Twelfth St. Detroit 8, Mich.

BOSTON (Mass.)

Acme (1)	9,200	Mary & Joan (4)	314,300
Addie Mae (2)	14,400	M. C. Ballard (3)	179,600
Agatha (2)	102,200	Michigan (2)	273,500
Agatha & Patricia (3)	113,400	Morning Star (3)	93,500
Alphonso (1)	1,000	Mother Frances (3)	132,200
Angie & Florence (4)	67,000		
Annie & Lucy (4)	26,700	Nancy B. (1)	36,000
Arlington (3)	381,000	Nautilus (3)	228,500
Atlantic (2)	189,600	New Star (3)	273,800
Ave Maria (1)	5,000		
		Ocean Clipper (1)	42,100
Baby Rose (1)	31,700	Ocean Wave (2)	100,700
Bay (2)	153,000	Ohio (3)	185,500
Bonnie (2)	246,600	Olympia (3)	132,700
Bonnie Billow (3)	298,900	Olympia LaRosa (5)	196,300
Bonnie Breaker (3)	171,400		
Bonnie Breeze (2)	190,700	Pam Ann (3)	220,400
Brighton (3)	363,100	Patty Jean (2)	257,500
Buzz & Billy (3)	113,400	Phantom (2)	354,500
		Plymouth (3)	275,800
Cambridge (3)	405,000	Puritan (1)	70,700
Carmela Maria (4)	58,300		
Catherine B. (6)	34,000	Racer (2)	293,200
Comet (2)	245,600	Raymonde (2)	199,300
C.R. & M. (1)	15,400	Red Jacket (3)	484,200
		Rosa B. (3)	282,200
Elizabeth B. (2)	210,700	Rosie (4)	43,000
Emily H. Brown (3)	234,300	Rush (3)	265,200
		St. Anna (2)	12,600
Flying Cloud (3)	433,500	St. Joseph (2)	63,100
Four (3)	297,700	St. Marco (1)	53,600
4P-521 (2)	2,900	St. Victoria (2)	66,700
		Salvatore (4)	4,300
Gaetano S. (2)	130,700	Sant' Antonio II (2)	14,400
Geraldine & Phyllis (3)	207,100	Santa Maria (5)	150,500
		Santa Rita II (2)	18,500
Hazel B. (1)	37,900	Savoia (1)	3,700
		Stanley B. Butler (1)	95,000
Jane B. (2)	188,000	Star of the Sea (3)	146,300
J. B. Junior (3)	279,500	Sunlight (1)	86,600
J. B. Junior II (2)	11,400	Swallow (2)	295,200
Jennie & Lucia (3)	193,400		
Josephine F. (2)	13,900	Texas (3)	337,700
Josephine P. II (2)	89,700	Thomas D. (3)	196,500
		Thomas Whalen (2)	211,500
Lady of Good Voyage (1)	48,000		
Lady of the Rosary (1)	32,700	Victoria II (1)	12,300
Lawrence Scola (1)	10,200	Victory II (1)	11,800
Leonard & Nancy (3)	105,200	Villanova (3)	107,400
Liberty Belle (2)	30,400		
Luckimee (2)	225,000	Weymouth (3)	342,700
		William J. O'Brien (2)	224,300
Magellan (4)	136,400	Winchester (2)	310,000
Maine (3)	355,100	Wisconsin (2)	185,500
Manuel F. Roderick (4)	256,200		
Maria Giuseppi (2)	3,100	Yankee (1)	13,000

ROCKLAND (Me.)

Araho (2)	205,000	Helen Mae II (2)	75,000
Calm (2)	560,000	John J. Nagle (2)	325,000
Crest (2)	530,000	Little Growler (4)	113,000
Dorothy & Betty II (3)	46,000	Mabel Susan (4)	120,500
Drift (2)	431,000	Ocean (1)	300,000
Elin B. (2)	78,000	Squall (1)	280,000
Ethel B. (2)	7,500	Surf (2)	463,000
Flo (5)	144,000	Wave (2)	390,000

Scallop Landings (Lbs.)

Jeanne D'Arc (1)	11,000	Rhode Island (1)	9,000
Pocahontas (2)	22,000		

NEW YORK

Carol-Jack (2)	61,900	Golden Eagle (1)	42,000
Catharine C. (2)	49,600	Hazel B. (1)	34,100
Edith L. Boudreau (1)	38,600	Teresa & Jean (1)	30,000

Scallop Landings (Lbs.)

Barbara & Gail (1)	5,200	Muskegon (2)	15,000
Clipper (3)	18,600	Norseman (1)	7,400
Enterprise (2)	18,800	Richard Lance (1)	7,000
Florence B. (2)	18,000	Rosalie F. (2)	13,600
Maridor (2)	17,400	S. No. 31 (1)	7,300
Miriam A. (1)	8,800		

SEATTLE

Halibut Fleet Fishery

Anne (1)	33,000	Inez M. (1)	36,000
Bernice (1)	17,000	Jane (1)	35,000
Bernice R. (1)	31,500	Lane (1)	20,900
Borghild (1)	14,000	Maddock (1)	27,000
California (1)	30,000	Nanna (1)	23,000
Carmella J. (1)	15,000	Nightingale (1)	21,500
Coral (1)	10,000	Nova (1)	24,000
DeLuxe (1)	27,000	Oceanus (1)	23,000
Dolphin (1)	26,000	Orbit (1)	20,000
Ethel S. (1)	38,000	Recovery (1)	27,000
Eureka (1)	14,000	Shirley J. (1)	33,000
Faith II (1)	21,000	Tryend (1)	25,000
Forward (1)	22,000	Unimak (1)	15,000
Freya (1)	30,000	Wesley (1)	10,500
Ikaros II (1)	16,000		

WOODS HOLE (Mass.)

Arnold (5)	40,800	Lucky (1)	1,600
Austin W. (1)	3,700	Madeline (4)	23,900
Bernice (5)	36,500	Mildred & Myra (3)	15,600
Bluefin (6)	18,200	Morning Star (5)	10,200
Cap'n Bill (3)	150,000	Nautican (1)	10,500
Carl J. (2)	9,500	Nellie Stanley (1)	600
Charles E. Beckman (2)	26,900	Priscilla V. (3)	41,600
Driftwood (1)	2,000	Pvt. Frank T. Kessler (1)	4,900
Ebenezer (1)	3,800	Roann (2)	32,200
Gertrude D. (3)	38,600	Rose Marie (1)	200
Janet & Elise (2)	7,000	Sea Buddy (1)	4,000
J. Henry Smith (1)	1,900	Southern Cross (3)	29,900
Judy Sue (4)	7,900	Three Bells (3)	17,200
Kelbarsam (5)	26,700	Viking (2)	3,100
Little Lady (2)	800	Winifred M. (1)	2,400

Scallop Landings (Lbs.)

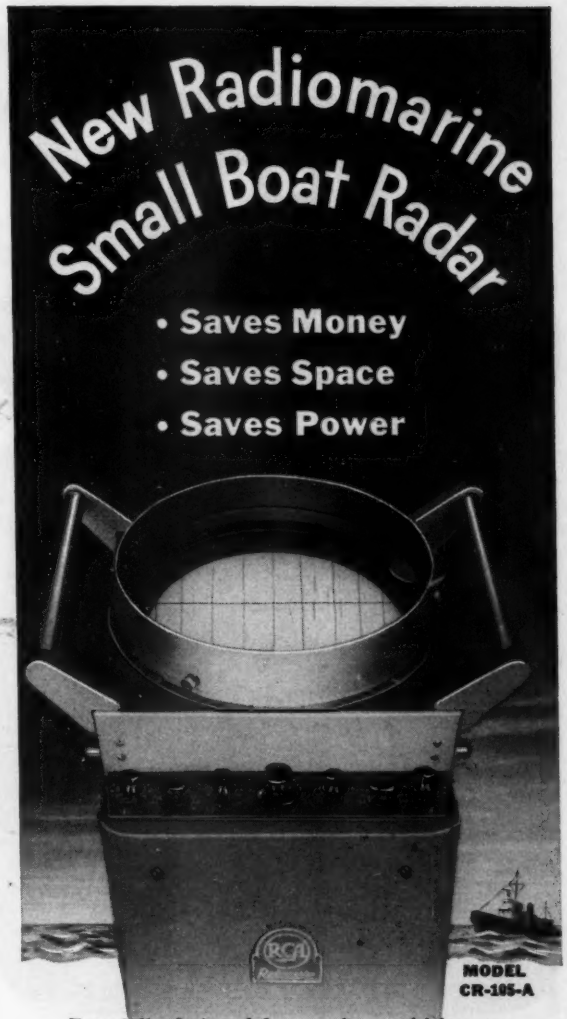
Aloha (1)	10,100	Maridor (1)	1,500
Beatrice & Ida (2)	10,500	New Bedford (1)	10,100
Friendship (1)	10,100	Porpoise (1)	10,100
Louis A. Thebaud (1)	8,800	Rus (1)	10,100

NEW BEDFORD (Mass.)

Adventurer (4)	82,900	Julia DaCruz (3)	47,700
Annie Louise (4)	40,400		
Annie M. Jackson (3)	88,000	Katie D. (3)	215,500
Austin W. (3)	105,000		
		Lorine III (1)	31,300
Barbara M. (4)	63,600		
		Major J. Casey (3)	99,200
Carl Henry (2)	83,000	Marie & Katherine (3)	70,400
Charles E. Beckman (2)	37,500	Mary Tapper (3)	105,000
Christina J. (3)	110,000	Midway (4)	215,200
Christine & Dan (4)	79,000		
Comber (1)	9,000	Nautican (1)	10,500
Connie F. (1)	28,500		
		Pauline H. (3)	291,900
Dauntless (3)	57,500	Phillip & Grace (1)	10,400
David & James (3)	12,200	Phyllis J. (3)	35,500
Driftwood (2)	10,700		
		Roann (2)	41,000
Ebenezer (4)	19,900	Roberta Ann (2)	63,000
Elva & Estelle (3)	47,900	Rosemarie V. (3)	62,100
Eugene & Rose (3)	84,000		
Evelina M. Goulart (1)	38,800	St. Ann (3)	112,800
		St. Nicholas (1)	173,000
Gannet (2)	94,000	Shannon (2)	44,500
Gladys & Mary (2)	76,100	Solveig J. (4)	241,900
Growler (4)	115,800	Stanley B. Butler (1)	70,300
		Star of the Sea (3)	130,000
Harmony (3)	87,500	Sunbeam (3)	77,500
Hope II (3)	111,600	Susie O. Carver (3)	41,700
Invader (3)	113,000	Theresa & Jean (2)	130,800
Ivanhoe (3)	69,300	Two Brothers (4)	44,900
Jacintha (3)	131,800	Venture I (2)	111,900
Janet & Jean (1)	17,000	Victor Johnson (3)	91,100
Jeannie Ann (1)	23,500	Viking (4)	160,800
Jimmy Boy (1)	17,000		
Jorgina Silveria (1)	28,600	Whaler (3)	160,200

Scallop Landings (Lbs.)

Agda (2)	12,000	Laura (1)	11,000
Aloha (1)	11,000	Laura A. (1)	11,000
Alpar (2)	22,000	Lauren Fay (3)	33,000
Amelia (2)	22,000	Linda & Warren (3)	16,700
		Linus S. Eldridge (2)	22,000
Babe Sears (2)	19,300	Louis A. Thebaud (1)	11,000
B. & E. (2)	22,000	Louise (3)	33,000
Barbara (2)	14,200	Lubenray (1)	11,000
Barbara & Gail (1)	10,000		
Beatrice & Ida (1)	11,000	Malene & Marie (2)	22,000
B. Estelle Burke (1)	11,000	Marjorie M. (2)	6,000
Bobby & Harvey (3)	25,500	Martha E. Murley (2)	20,000
Brant (1)	9,000	Mary Ann (2)	22,000
Bright Star (3)	33,000	Mary J. Hayes (2)	22,000
		Mary J. Landry (2)	16,500
Camden (2)	22,000	Monte Carlo (2)	22,000
Carol & Estelle (3)	33,000	Moonlight (3)	31,000
Catherine & Mary (3)	33,000		
Charles S. Ashley (2)	22,000	Nancy Jane (3)	33,000
		Nellie Pet (1)	11,000
Dartmouth (2)	22,000	New Bedford (2)	22,000
David A. (1)	9,500	Newfoundland (2)	22,000
Debbie Jo-Ann (2)	22,000	Noreen (2)	22,000
Dorothy & Mary (2)	21,000		
		Pearl Harbor (2)	22,000
Edgartown (3)	33,000	Pelican (2)	22,000
Eleanor & Elsie (2)	21,500	Porpoise (1)	11,000
Elizabeth N. (2)	22,000		
Enterprise (1)	2,000	Richard Lance (1)	11,000
Eugene H. (2)	22,000	Rush (1)	11,000
Eunice-Lilian (2)	22,000	Ruth Moses (2)	22,000
Fairhaven (2)	22,000	Santa Cruz (1)	6,000
Falcon (2)	21,300	Sea Hawk (2)	13,800
Felicia (1)	11,000	Sea Ranger (3)	33,000
Flamingo (1)	11,000	Sippican (3)	33,000
Fleetwing (3)	33,000	Smilyn (2)	19,000
Friendship (1)	11,000		
		Ursula M. Norton (3)	33,000
Jerry & Jimmy (3)	25,100		
John G. Murley (1)	11,000	Vivian Fay (3)	33,000
Josephine & Mary (2)	21,500		
		Wamsutta (2)	22,000
Kingfisher (3)	33,000	William D. Eldridge (2)	22,000



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Ariel (2)	23,800	Medan (1)	290,000
		Minnie (1)	265,000
Blanch R. III (4)	15,300		
		Natale III (1)	6,400
Carlannsul (3)	12,500		
Carmella & Louis (1)	3,000	Olive Mae (1)	4,000
Cathy & Aldid (1)	2,300		
Challenge (4)	32,500	Paul York (1)	6,000
Challenger (6)	30,400		
Courier (1)	200,000	Quincy (1)	190,000
Crescent (10)	22,000		
		Rebecca II (3)	18,500
Dorothy & Ethel II (4)	58,000		
		St. George (2)	389,000
Eddie & Lulu M. (3)	11,000	St. Joseph II (4)	27,300
Elin B. (1)	62,000	St. Joseph IV (1)	500
Ethelina (1)	24,000	St. Stephen (3)	10,000
Evelina (1)	65,000	Santa Lucia (3)	13,000
		Silver Bay (1)	149,000
Golden Dawn (1)	9,000		
		Theresa R. (1)	85,000
Lawrence Scola (6)	30,700	Vandal (2)	52,500
Lawson (1)	16,000	Vida E. (1)	3,000
Lone Ranger (2)	5,500	Vida E. II (5)	51,300
		Virginia Ann (1)	1,000
Marie H. (3)	13,000	Voyager (1)	30,000
Marie M. (1)	5,000		
		Wawenock (1)	225,000
		Winthrop (1)	140,000

Scallop Landings (Lbs.)

Adele K. (1)	600

Provincetown's New Dragger Has Good First Trip

The new fishing boat *Stephen R.*, Capt. Frank Reis, Jr., returned from her maiden fishing trip on May 12 after encountering every conceivable type of weather on the 10-day voyage. The vessel left again on the 13th with her 10,000 pounds of sea scallops, to land them at Gorton-Pew Fisheries, Gloucester.

Capt. Reis said his new vessel handled in an excellent manner, despite the rough weather. On May 5, more than 100 miles east of Peaked Hill Bar, the boat jogged in high winds and a virtual blizzard, which lasted at least three hours. She hit winds up to 60 and 65 miles an hour.

To Grow Oysters on Racks

Platforms and racks will be erected or anchored in Oyster River, West Chatham, where experiments will be undertaken this Spring and Summer to study the effect of elevation on growth and survival of oysters. A group of oystermen working with Dr. Paul Galtsoff, Fish & Wildlife Service, will carry out the program. J. C. Hammond of the Chatham Oyster Grower Associates, is representing the growers.

"Judy and Tony" Changes Hands

The 40-ft. Provincetown fishing boat *Judy and Tony* was scheduled to be launched from Taves Boatyard last month under a new name and under new ownership. She has been purchased by Victor Pacellini of Provincetown, and other interests.

The boat, to be renamed the *Del Vin Ra*, after the skipper's children, was purchased from Capt. Tony Costa and will go sea scalloping. New installations include a shaft log and keel; new depth sounder and radio.

She will be equipped with two sets of scallop dredges so she can fish both sides. Although Capt. Pacellini has been fishing since he was 13, this is the first boat he has owned.

Tait Joins Fishery Biologists in Alaska

Dr. Howard Tait, biologist of the Woods Hole laboratory of the Fish & Wildlife Service, has left to join the fisheries biologists at Juneau, Alaska. He will assist Dr. William F. Royce, chief biologist, and former director of the Woods Hole laboratory, in the salmon investigation being carried on in the Northwest Pacific area.

Rhode Island Sets Higher License Fees for Quahaugers

Governor Roberts on May 2 signed into Rhode Island law a number of legislative bills affecting both commercial and amateur shellfishermen. The license fee for those who wish to take quahaugs commercially was raised from $1 to $25. The boat license fee remains the same.

Amateur shellfishermen still will be allowed to take one bushel of quahaugs without a license, but no longer will be permitted to sell the shellfish they take. The new laws also will affect non-residents vacationing in the State. It will cost them $5.25 to take quahaugs.

Exempt from the new restrictions on non-residents are real estate owners. They hold the same rights as Rhode Island residents—no license required to take up to one bushel a day.

Revenue from the new license fees will be turned back to the State Dept. of Agriculture and Conservation for development of the shellfish industry. The Department hopes to realize enough money to carry on the $25,000 program of transplanting quahaugs from polluted to clean waters.

One of the new acts also opens up to dredgers, for the first time in 20 years, an area in Narragansett Bay. The dredgers for two decades have been confined to the Sakonnet River from December 1 to April 1. After next December 1 they will be able to drop their dredges in the east passage of Narragansett Bay between the southern half of Prudence Island and the Portsmouth mainland. But it will cost them more money for licenses, too. Boat captains will have to pay $10 instead of $5 for licenses, and dredge boats will have to have $25 registration certificates.

The act also opens up the deep waters of Mount Hope Bay to dredging, but that is an academic right since the bay has been closed by pollution for many years. Shallow water in Mount Hope Bay is reserved for hand rakers—when and if the water is declared relatively free of pollution.

Another new law empowers the State Department of Agriculture and Conservation to open and close shellfish producing areas for management purposes. Hand rakers view that law as protection if the dredgers should attempt to use the new East Passage area as "home base" from which they can stray to near-by waters that may be richer in quahaugs.

Still another new act legalizes year-round dredging for sea clams. That dredging must be done off the coastline, and the law says that "for purposes of this section, coastline refers to the land facing the open sea."

Lobstering is made legal throughout the year by another new law.

DaCosta to Skipper "Stormy Weather II"

John C. DaCosta, veteran Warren dredgerman, has been named skipper of the State's newly-acquired 83 ft. quahaug transplant boat *Stormy Weather II*. The vessel was scheduled to start early this month on the third annual transplant of quahaugs from polluted waters above Conimicut Point to clean lower bay waters.

Tagged Lobster Caught

Last March Robert Campbell, salt water marine biologist for the State Division of Fish and Game, brought back to Rhode Island 100 deep-sea lobsters caught by a Fish & Wildlife Service trawler along the continental divide. These lobsters were tagged and released along the Rhode Island shore in shoal water.

On May 9 the first of the 100 lobsters was caught in a lobster pot by Russell Wallis of West Barrington. In the 55 days since the lobster's release, it had traveled 9 miles.

The biologist hopes other lobstermen will catch more of the tagged lobsters and report their findings to him, as a means of determining if the deep-sea jumbos are hanging around to build up the State's lobster supply.

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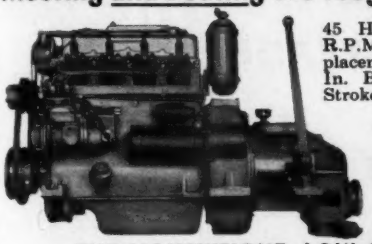

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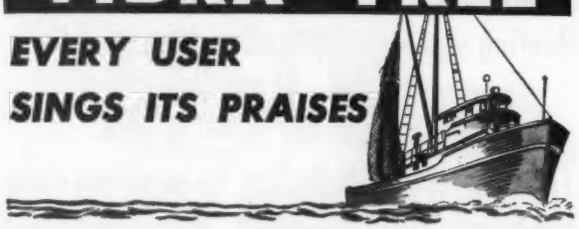

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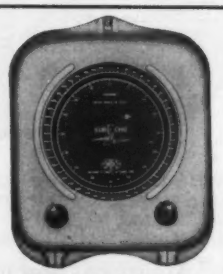

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Great Lakes Whitefish Catches Improve

Early this month commercial fishing on the Great Lakes was functioning at virtually peak, with catches of the usual species generally taken in good commercial quantities. On Lake Superior, commercial fishermen were getting somewhat better whitefish takes than before from trap nets, while gill-netters were making fair catches of lake trout.

In the Green Bay area, where good yields of walleyes were reported under spotty conditions, local netters enjoyed a good smelt yield from their nets this Spring. Catches of other fish were fair to good.

On Lake Michigan, both Wisconsin and Illinois fishermen were getting good yields of chubs, while perch catches were ranging from fair to better. On Lake Huron there is a good market for walleyes, and a steady market for yellow perch, sheepshead and pickerel, as well as for chubs.

From Lake Erie, good catches of blue pike, sheepshead, sunfish, white bass, yellow perch and yellow pike were being made, and western Lake Erie fishermen have been getting heavy takes of white bass.

Fleets from Ohio were producing the biggest yields from Lake Erie, while Pennsylvania and New York producers were about even in catches of blue pike, perch, sheepshead, white bass, etc.

Harbor of Refuge Sought

Rep. Victor A. Knox of Sault Ste. Marie, Mich. hopes that Senate action will permit construction of a harbor of refuge at Whitefish Point on Lake Superior in Michigan. The project is one of the 16 endorsed by the projects committee of the 43rd National Convention of the National Rivers and Harbors Congress.

Indiana Fishermen Getting Fair Catches

Commercial fishermen operating on Lake Michigan from Indiana ports were taking fairly good catches of lake chubs and yellow perch in the southern waters of the lake recently.

Indiana fishermen, unfortunately, are obliged to fish within the 50-mile area of their home port under a single license, confining them to waters not too abundant with fish, save for perch and chubs.

Brown Trout Outnumber Lake Trout

Some commercial fishermen operating off Wisconsin's Chequamegon Peninsula in Lake Superior said recently that they had been finding more brown trout in their nets than lake trout. Brown trout may not be taken commercially, under Wisconsin fishing regulations. Until recent years, brown trout were considered an incidental species, as compared with lake trout.

Nearly 14,000 Lampreys Taken in Week

The highest weekly total of lampreys taken in weirs operated on Lake Michigan and Superior streams was reported for the week ending May 18 by the Marquette, Mich. office of the Fish & Wildlife Service. The total was 13,673. That brought the season's take from the weirs to 28,940.

Cedar River, Mich. again produced the highest total of lampreys of any of the 52 weirs in operation. It accounted for 3,580 lampreys during that week.

Testing Poison to Kill Lampreys

Electric barriers now being used to combat sea lampreys in the Great Lakes soon may be joined by a selective poison designed to kill the lamprey in its larvae stage. Actual stream testing of the poison, selected as the most promising of several considered by the Fish & Wildlife Service, is scheduled for this Summer on a section of a small stream in the northeastern part of upper Michigan.

FOREIGN BAILINGS

ADVICE ON TURKISH FISHING CRAFT will be given this year by H. I. Chapelle, Maryland naval architect who has been sent to Turkey by Fisheries Division of Food and Agriculture Organization of United Nations. Since Turkey must expand her fisheries to increase her food supply, Mr. Chapelle will be concerned with motorization of existing fishing boats, development of new boats, and recommendations about 280 boat engines Turkey already has bought.

GAIN IN MEXICAN SHRIMP BOAT BUILDING, particularly in the cities of Campeche and Ciudad del Carmen, has occurred due to prosperous shrimping year in 1955. It is estimated that about 50 percent of new construction will contribute favorably to shrimp fishery, but balance is believed to be an over-extension of future economic prospects of Mexican shrimp industry.

B. C. OYSTER INDUSTRY has expanded from experimental stage of a few years ago to point where 85,000 gallons of oysters were harvested from lower mainland and Vancouver Island beds last year. All oyster seed comes from Japan, and this Spring a record 2,000 cases were planted.

NORWAY'S WINTER COD FISHERY in Lofoten area ended about April 20, with total catch of 53,500 metric tons, valued at $7.7 million. This exceeds 1954 catches by close to 20,000 tons, but is lower than average catch since end of World War II.

NEW BRUNSWICK DRAGGER FLEET BLESSING will take place July 1 at Shippegan. The Gloucester County fishing fleet is among most modern in world, with about 60 draggers going out to banks off Newfoundland. They average an annual catch of a million pounds per dragger.

TURKISH FISHERY EQUIPMENT EXHIBIT is being organized to coincide with Fourth Meeting of General Fisheries Council for Mediterranean, which will take place at Istanbul, Turkey, from September 17 to 22.

Mississippi-Based Research Vessel Exploring Deep Waters for Shrimp

The *Oregon* was scheduled to leave Pascagoula on May 1 to carry out three weeks of deep-water shrimp exploration in the north-central and northwestern Gulf of Mexico. The primary objective of this trip is to conduct extensive coverage of the 200 to 300 fathom area off the Texas coast, using 40-ft. flat trawls. If significant quantities of shrimp are located, production-type dragging will be carried out using 80-ft. balloon and 100-ft. flat trawls.

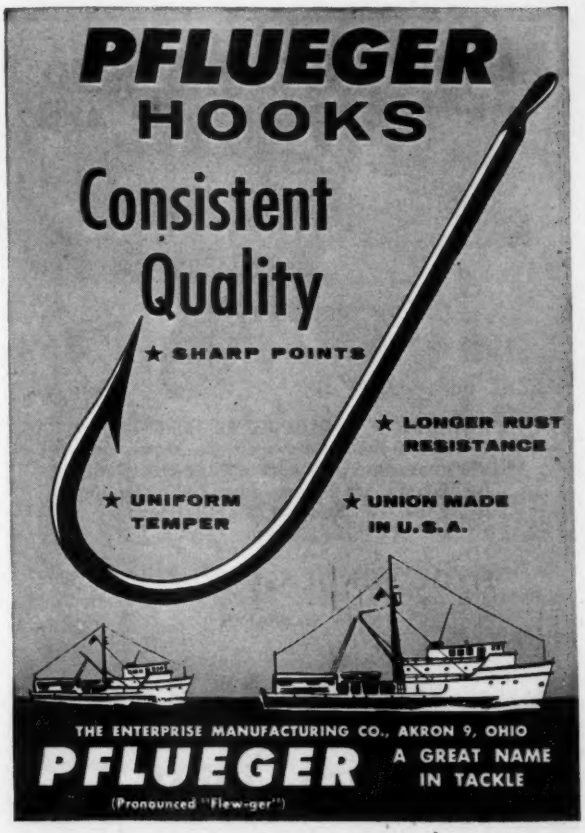
At the request of several members of the Gulf shrimp industry, a series of exploratory drags will be made for brown-grooved shrimp in depths of 40 to 75 fathoms along the Louisiana and Texas coasts between the Mississippi Delta and Aransas Pass, Texas.

Safety Car Heating Now Safety Industries

Announcement is made by The Safety Car Heating & Lighting Co., Inc. New Haven, Conn., of a change in corporate name to Safety Industries, Inc., which became effective June 1.

H. F. Kneen, President of the firm, states that the change in corporate name follows the successful accomplishment of the Company's diversification program, resulting in greatly broadened scope of activities.

Safety Industries, Inc., has three divisions and five subsidiaries. The parent company was established in 1887, and is a prominent supplier of electrical equipment for the marine industry.



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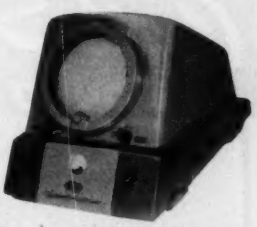

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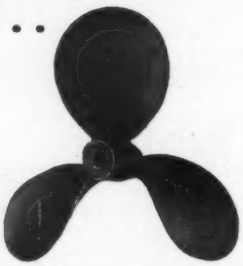

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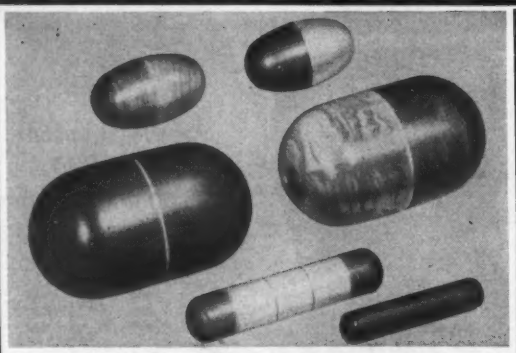

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New Bedford Has Several Boats Catching Deep-Sea Lobsters

The *Captain Deebold*, Capt. Leif Talgo of Fairhaven, landed 6,000 lbs. of deep-sea lobsters at MacLean's Seafoods, Fairhaven, on May 23. It was the first catch of the deep-sea variety to be landed at this port. The vessel has Fiberglas lobster tanks on deck and plastic piping through which fresh sea water is continuously pumped in the aeration method by centrifugal pumps.

Capt. Talgo stated that most of the lobsters he caught were in waters from 75 to 90 fathoms. An average tow was from 1½ to three hours each time, and dragging was more successful at night.

Besides the *Deebold*, the *R. W. Griffin* of Woods Hole and the New Bedford boat *Janet* and *Jean* have been converted into deep-sea lobster boats. Earlier in the month, the *R. W. Griffin*, Capt. Warren B. Vincent, landed 6,000 pounds of the deep-sea lobsters. Price of the shellfish, according to weight and condition, varied from 30 to 50 cents a pound. The shellfish weighed from 5 to 20 pounds each.

The Friars, owned by Mr. MacLean, is in the process of being converted to deep-sea lobstering, and will be ready in about a month. In keeping with the expected increase in shellfish production, Mr. MacLean has expanded his seafood plant, adding 54 lobster tanks to the 10 already installed. Each contains continuously-pumped sea water to keep the lobsters fresh.

"St. Nicholas" Lands Record Catch

An all-time record for a fish catch landed in New Bedford was set May 3, when the Gloucester dragger *St. Nicholas* sold 175,000 lbs. for more than $13,000. The previous record was held by the New Bedford dragger *Stanley Butler*, when she landed 150,000 lbs. in March 1944 and netted $12,790.

The *St. Nicholas* caught her fish in the ice-bound Gulf of St. Lawrence, about 700 miles from New Bedford, a place rarely fished by local boats. The eight-man crew of the 100 ft. dragger received approximately $1,000 each as their share of the catch for seven days fishing.

The catch included 136,000 lbs. gray sole; 30,000 lbs. cod; 2,000 lbs. haddock and 5,000 lbs. dabs.

"Palestine" Sinks off Rhode Island

The scalloper *Palestine* struck a submerged object and sank off Point Judith, R. I. on May 3. Her captain, Robert A. Sanchez, Jr., and three crewmen rowed 14 miles to the Buzzards Bay Lightship and were brought to New Bedford by a Coast Guard patrol boat.

Believed to have been the oldest vessel in the New Bedford fleet, the *Palestine* was built in 1904 as a pleasure craft. She was converted in 1938.

Tagged Seed Scallops Recovered

Last month three tagged seed scallops were recovered by the scalloper *Ursula M. Norton*, Capt. Ole Olsen, from the same place they were released five months previous. They were about 4 inches in diameter when released and when caught were about 4½ inches in diameter.

The Fish & Wildlife Service research vessel *Albatross III* released 800 tagged seed scallops in December, 1955, as part of a study on the growth rate and habits of the shellfish. Several thousand more seed scallops will be released by the Government agency this year. A $1 reward is paid for each tagged shell turned into any representative of the Fish & Wildlife Service.

Fish Weigher Appointed

Henry B. Murdoch has been appointed public fish weigher for the port of New Bedford by Mayor Francis J. Lawler. Legislation signed into law by Gov. Herter last April authorized drafting of standards to regulate the

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culling and weighing of fish. The public weigher and his deputies will enforce the regulations.

"Catherine T." Repowered

A new 300 hp., D375 Caterpillar Diesel recently was installed in the 97' dragger *Catherine T.* by Perkins-Milton Co., Inc. The engine is fitted with a Snow-Nabstedt 3:1 reduction gear and swings a 56 x 36 propeller. Capt. Cleary of Newport, R. I. owns the boat, which fishes from New Bedford.

Vessels on the Ways

Hauled for Spring painting and sheathing at D. N. Kelley & Son, Inc. marine railways, Fairhaven, have been Capt. Rudolph Matland's boat *Rush*, the *Arnold*, owned by Hans Haram, and the *Empress*. The *Empress* was fitted with a new shoe and had propeller work done after going aground on Sconticut Neck.

At Peirce & Kilburn's, Fairhaven, the *Wawenock*, owned by Harvey Gamage of So. Bristol, Me., Edward Sanchez's *Smilyn* and the *Laura A.*, owned by Chris Aiello, have had complete paint jobs with International paint.

Dragger "Molly & Jane" to be Repowered

The dragger *Molly & Jane*, owned by Correia & Sons of New Bedford, is to be repowered with a 6-110 General Motors Diesel. The engine and a 50 x 38, five-blade Federal propeller will be supplied by R. A. Mitchell Co. of Fairhaven.

Holding Conditions for Lobsters

Recent Canadian studies indicate that water temperatures of between 45 and 60° F. are safe for holding live lobsters in tanks and live cars prior to sale, although the shellfish can stand either higher or lower temperatures when other conditions are favorable. The research was done by Dr. D. W. McLeese from 1949 to 1953 at the St. Andrews Biological Station of the Fisheries Research Board of Canada.

Salinities of water in which lobsters are held should be kept above 25 parts per thousand or 85% sea water. Oxygen should be held above 50% saturation. This last requirement is usually met in natural waters. However, oxygen supply may be critical where many lobsters are crowded into a small space.

In planning his experiments, Dr. McLeese had to consider that a lobster's resistance is affected by acclimation. That is, a lobster which has been held at 59°F. can stand a temperature of 82°F. better than one which has been kept at 41°F. Rapid changes in temperature, salinity, etc. should be avoided with live lobsters being held in tanks.

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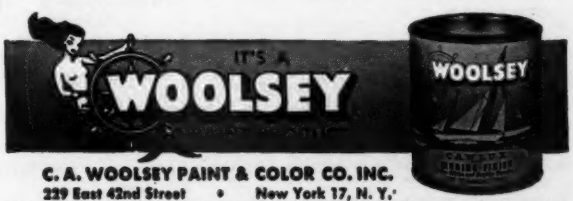

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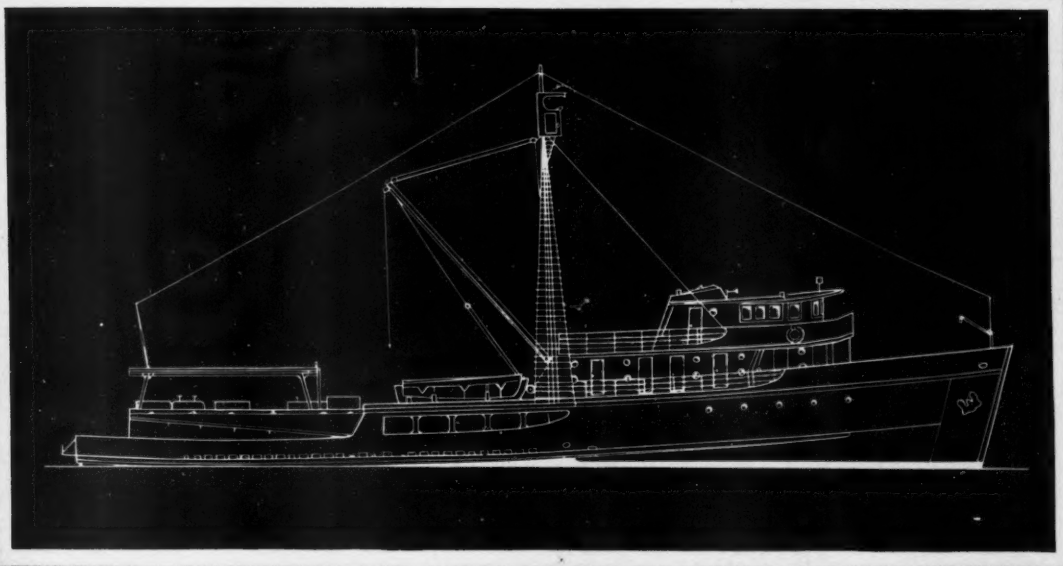

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World-famous fuels and lubricants—Mobilfuel Diesel, Mobilgas, Mobil Marine Oils—every Socony Mobil product has a reputation among fishermen for protecting engine performance, increasing economy and cutting down repairs and maintenance. Their continual use assures smooth, trouble-free operation, trip after trip.

Expert, efficient service—Whether you tie up to a fueling dock or a Mobil Marine barge comes alongside, you're always sure of quick and expert fueling service. This high standard of operation cuts down on port time... means faster turnarounds for your fleet!

Mobil Marine products are available at every major fishing port. Wherever there's a harbor, you're likely to find the familiar Flying Red Horse sign of service.

Why accept less than all this for your fleet?

Mobil Marine PRODUCTS

FAVORITE WITH AMERICA'S FISHING FLEETS!

Mobil Marine Products

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Here's the latest thing in floats—the ARK plastic float. Only half the weight of cork, ARK plastic floats will not absorb water . . . will not rot and the materials used to wash and clean nets will not affect them.

What's more — ARK plastic floats are crush resistant. See and test ARK plastic floats for yourself. Contact the supplier nearest you.

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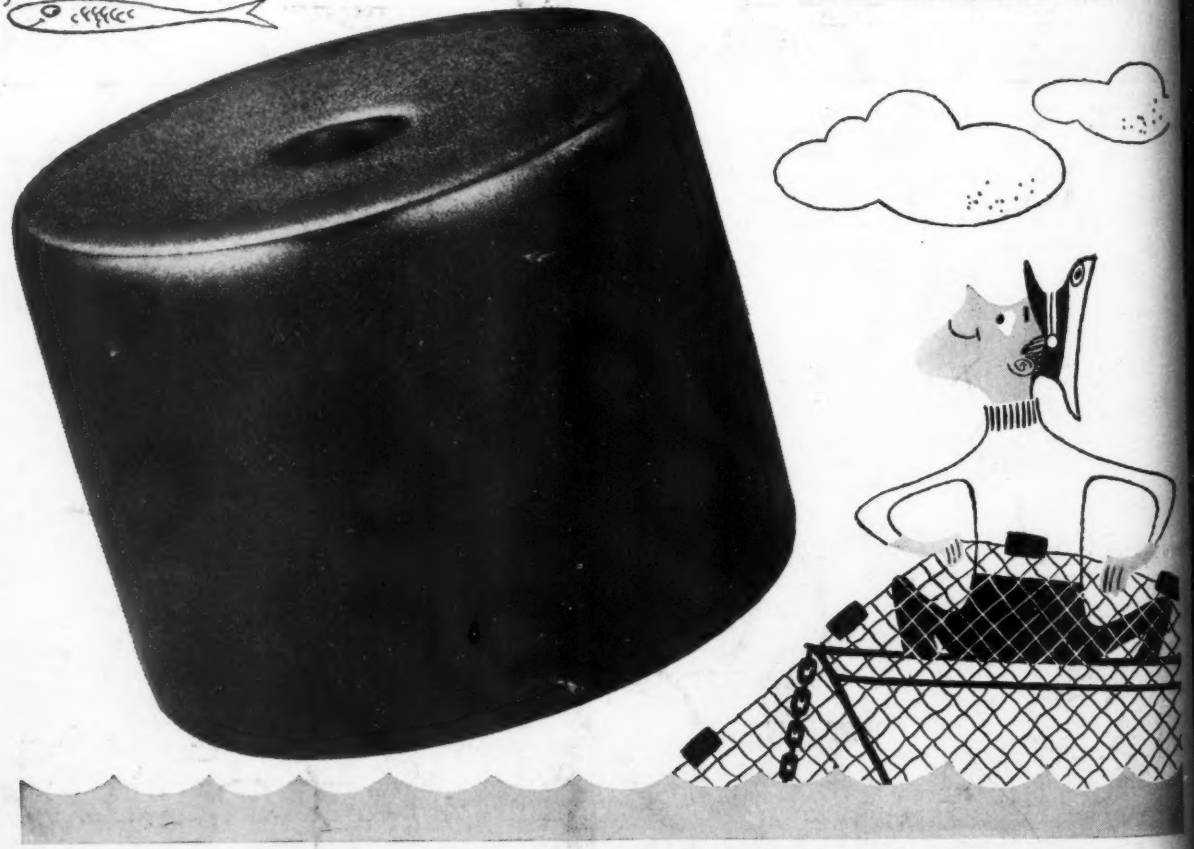
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